

# MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

Vol. XIII. No. 9.  
WEEKLY.

BALTIMORE, APRIL 7, 1888.

\$4.00 A YEAR.  
SINGLE COPIES, 10 CENTS.

**Sole Manufacturers of EUREKA PACKING** **JAS. SMITH & CO.** **Dealers in MANUFACTURERS' MILL and ENGINEERS' SUPPLIES**  
Steam, Hydraulic and Locomotive Packing, Works, 413 to 421 Race St., Cor. of Crown.  
OF EVERY DESCRIPTION. Office & Store, 137 Market St., Philadelphia.  
Send for Prices. CIRCULARS AND PRICE-LISTS MAILED UPON APPLICATION

**Milling Outfits for Flour and Meal.**  
WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.  
Manufactory Established in 1851. Pamphlets with Prices Mailed Free.  
**NORDYKE & MARMON CO., INDIANAPOLIS, IND.**

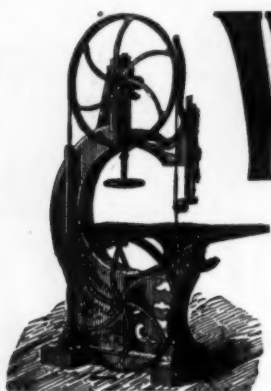
**ELEVATORS** **MORSE ELEVATOR WORKS.**  
**MORSE, WILLIAMS & CO.** Successors to CLEM & MORSE  
Manufacturers and Builders of HYDRAULIC STEAM, ELEVATORS  
(ELT and Hand-Power, PASSENGER and FREIGHT) With most approved Safety Devices.  
Office: 1105 FRANKFORD AVENUE, Dumb-Walters, Automatic Hatch-Doors, &c.  
Works: FRANKFORD AVE., WILDEY & SHACKANAXON STS. PHILADELPHIA, PA.  
Branch Office, 108 Liberty Street, NEW YORK.

**Report of the AQUEDUCT Commissioners.**  
(NEW CROTON AQUEDUCT, NEW YORK.)  
AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.  
**PLANT** (by actual count from Table 13.)  
Number of Ingersoll Drills used..... 245  
Number of Drills of all other kinds used..... 203  
**PROGRESS** (by actual figures from Table 8.)  
Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle ft. weeks)..... 38.73  
Average weekly progress in best 10 headings that used other drills (omitting all idle weeks)..... 31.73  
DIFFERENCE OF 20 PER CENT. IN FAVOR OF INGERSOLL DRILLS.  
All headings where Ingersoll Drills were used exclusively have been completed, except the section under Harlem River, now being driven by Ingersoll Drills and Air Compressors. Send for description of Aqueduct, with Engineers' Tables of Progress and Catalogue. Sent free. We have procured a limited number of the Report of the Aqueduct Commissioners, and will send them by express on receipt of \$5, actual cost to us.

**ROOT'S NEW WATER TUBE STEAM BOILER,**  
Safe, Economical, Durable.  
Recently adopted by the BRUSH ELECTRIC LIGHT CO., at Louisville, the EDISON ELECTRIC LIGHT CO., Detroit, and the COLUMBUS EDISON ELECTRIC LIGHT CO., Columbus, Ohio.  
**Abendroth & Root Manufacturing Co.**  
28 CLIFF STREET. - - - NEW YORK.  
**INGERSOLL ROCK DRILL CO.,**  
10 Park Place, New York City.  
**SELLING AGENTS:**  
A. B. KNIGHT, Esq., Rochester, N. Y.  
A. S. FISKE, Esq., 64 Johnston Building, Cincinnati, O.  
WILLIAM H. SMITH, Esq., 118 Dearborn St., Chicago, Ill.  
CHAR. E. ARNHOFF, Esq., 49 Mason Bldg., Boston, Mass.  
JOHN S. MOORE, 180 Gravier Street, New Orleans, La.  
T. B. PACKER, Shidley Building, Kansas City, Mo.  
V. MERRILL, 129 N. Third Street, Phila., Pa.  
S. C. DODGE, Chattanooga, Tenn.

**Cotton and Woolen Mill Supplies,** **Thos. K. Carey & Bros.**  
LEATHER and RUBBER BELTING, LATHES, PLANERS, DRILLS. 21 S. CHARLES ST., BALTIMORE, MD.  
Write for New Machinery Catalogue.

**THE MEDART PATENT WROUGHT RIM PULLEY.**  
OVER 300,000 NOW IN USE. THE LIGHTEST, STRONGEST, BEST BALANCED and CHEAPEST in the WORLD.  
**Shafting, Hangers, Couplings, &c.**  
**MEDART PATENT PULLEY CO.,** 1208 TO 1214 N. MAIN STREET, ST. LOUIS, MO.  
Stores: 99 to 101 W. Second St., Cincinnati. 24 & 26 S. Canal St., Chicago.  
**FRANK W. SWETT, MANUFACTURER OF BAND SAWS,** 69 SOUTH CANAL ST. CHICAGO, ILL. **EVERY BLADE WARRANTED**



# Wood Working Machinery



COMPLETE OUTFITS FOR PLANING MILLS

**H. B. SMITH MACHINE CO.**

Send for catalogue and visit our extensive  
warerooms if possible.

**925 MARKET STREET.**

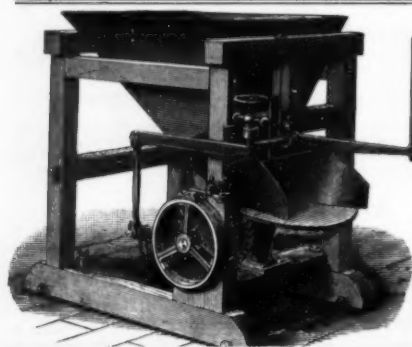
**PHILADA, PA., U. S. A.**

## Cotton Seed Oil Machinery.



**Hydraulic Engineers,**

**Dayton, Ohio, U. S. A.**



**Mecklenburg Iron Works,**

CHARLOTTE, N. C.

MANUFACTURERS OF

Saw Mills, Cotton Presses, Engines, Boilers, Water Wheels,

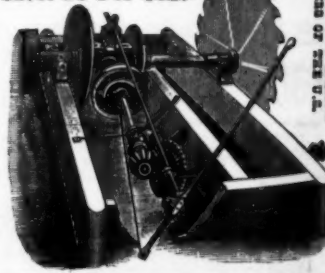
★ **Mining Machinery,** ★

CORNISH PUMPS, CRUSHERS, AND STAMP BATTERIES.

Southern Agents of

Challenge Ore Feeders, Lidgerwood Hoists, Embrey Tables.

BEANT'S PATENT FEED AND  
BACKING DEVICE.  
Saves 20 Per Cent.



**Keep Your Belts From Slipping**

And save your power  
by using

**FRICION COVERING FOR PULLEYS.**

Satisfaction Guaranteed.  
Easily Applied.  
No Rivets. Effective.

**National Pulley Covering Co.**

**BALTIMORE, MD.**



These Conductors have received the  
highest indorsements ever issued on  
this class of goods, and are therefore  
standard. Write for prices and in-  
close 10 cents in stamps for samples.



To the Stove and Hardware Trade:

THE LIGHTNING ROD TRADE has undergone a change in the past few years. Formerly men with wagons traveled over the country, but now these men have almost disappeared. The business of erecting rods on houses has passed into the hands of tinners, hardwaremen and builders, and we simply manufacture them at wholesale for this class of dealers. The people in each locality prefer patronizing a home firm, and you can just as well sell them their Lightning Conductors at the same time you are doing the tin or roofing work. We furnish printed directions, so that any one can put them up without difficulty. We also manufacture all kinds of

**Weather Vanes, Glass Balls, &c.**

**MUNSON LIGHTNING CONDUCTOR CO., Indianapolis, Ind.**

**DEFIANCE PAINT WORKS, Cincinnati, O.,**

Manufac-  
urers

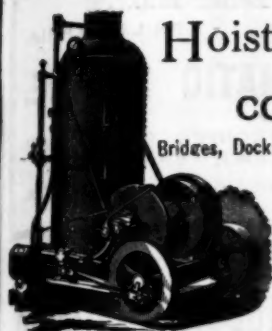
**Ready Mixed IRON ORE PAINTS,**

ASPHALTUM VARNISH,  
JAPAN DRYERS, PAINT OILS.



# HOISTING ENGINES FOR MINES, FURNACE AND FACTORY.

—Also, Superior Boilers.—



Hoisting • Machinery

FOR  
CONTRACTORS,

Bridges, Dock Building, Pile Driving and Excavating.  
300 STYLES AND SIZES.

AGENTS:

COOLIDGE & BUCK, Chattanooga, Tenn.

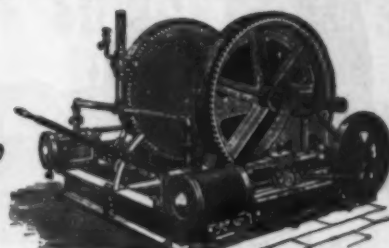
• MINE •

AND

FURNACE HOISTS,

Horizontal Engines

FOR MANUFACTURING.



LIDGERWOOD MFG. CO.

No. 96 Liberty St.  
New York.

H. A. ROGERS, 19 John Street,  
NEW YORK.

RAILWAY

AND

Machinists' Supplies.

SOLE AGENTS IN THE U. S. FOR

Moncrief's Scotch Gauge Glasses.

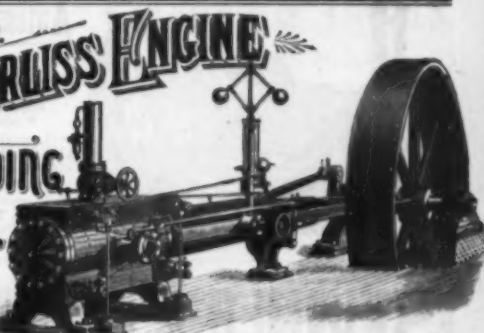
GENERAL AGENT CELEBRATED TANITE EMERY WHEELS.



THE IMPROVED  
FISHKILL CORLISS ENGINE

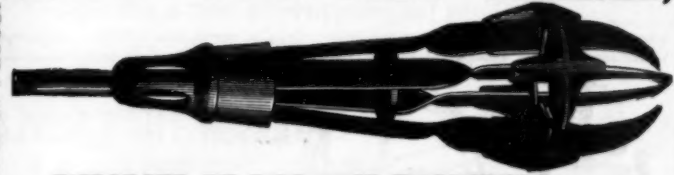
BUILT BY THE  
FISHKILL LANDING  
MACHINE CO.

FISHKILL HUDSON.  
N.Y.



NATIONAL STEEL TUBE CLEANER,

For Cleaning  
Boiler Tubes.

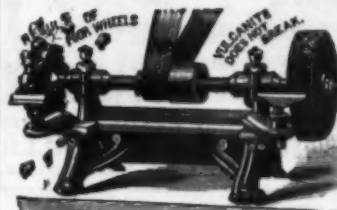


ENDORSED BY THE BEST ENGINEERS.

THE CHALMERS-SPENCE CO., 419 East 8th St., NEW YORK

35 2d St., Phila.; 131 First Ave., Pittsburgh; 19 Pearl St., Boston; 144 and 146 Lake St., Chicago.

SWIFT RUNNING EMERY WHEELS.



The Original SOLID VULCANITE  
EMERY + WHEELS.

Runs Easy and Safe, Cool and True.

Is More Durable—Hence Cheaper.

A trial will convince you of this. We

Knife-Grinding Wheels a Specialty.

NEW YORK BELTING & PACKING CO.

Sole Manufacturers,

J. H. CHESTER, 15 Park Row, NEW YORK.

## AMERICAN SUPPLY COMPANY,

Formerly Myron Fish & Co., of Valley Falls, R. I., and Kendrick Loom Harness Co., of Providence, R. I.

—MANUFACTURERS OF—

LOOM HARNESS AND REEDS.

Oak Belting, Lace and Picker Leather, and Dealers in Supplies for Cotton, Woolen and Silk Mills.

Agents for Joseph Moore's Sons'  
Roller, Slasher & Clearing Cloths.

—Agents for—

RODDICK'S PATENT IMPROVED OIL CANS.

Calf, Sheep and Lamb Roller Skins, and Roll Covers' Tools.



WE HAVE  
Unequalled Facilities for Furnishing  
Shuttles & Fiddle Frames,  
WIRE HEDDLES & WIRE GOODS  
Of all Descriptions.

—Special Notice to Worsted and Silk Mills.—

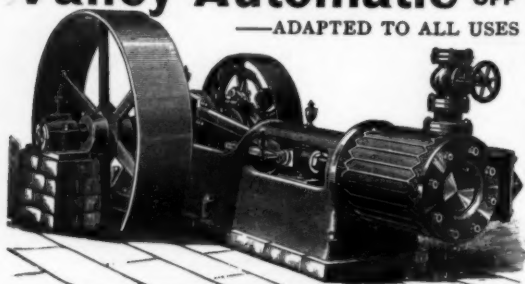
We Manufacture both Worsted and Cotton Machine-Knit Mail Harness for Weaving Fine Worsted and Silk Goods. Also a Full Line of  
Supplies for Jacquard Looms.

Office and Salesrooms, 10 Exchange Place, Providence, R. I. —FACTORIES:—  
PROVIDENCE and VALLEY FALLS, R. I.

A. D. LOCKWOOD, Pres. JOHN KENDRICK, Vice-Pres. MYRON FISH, Treas. JOHN A. CARTER, Sec. JOSEPH H. KENDRICK, Gen'l Agent.

## Valley Automatic <sup>CUT OFF</sup> Engines

—ADAPTED TO ALL USES REQUIRING—

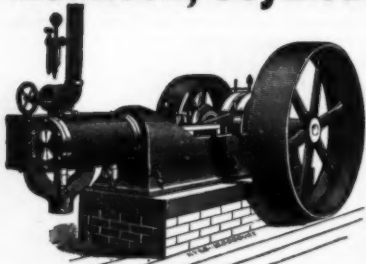


Superior Regulation and Economical Use of Steam.  
Send for Illustrated Catalogue.

**Valley Iron Works,**

MANUFACTURERS,  
**WILLIAMSPORT, PA.**  
Stocks carried by  
Wm. C. Codd, Baltimore, Md.  
Jas. Mahony & Son, New York City.  
Ivins & Son Machine Co., New Orleans, La.

## McIntosh, Seymour & Co., Auburn, N. Y.



### Automatic Cut-Off Engines

5 to 300 Horse Power.

Economy in Fuel Consumption,  
Close Regulation,  
Great Durability and Simplicity,  
Perfect Workmanship and Design.

Unrivalled in these qualities, our engines are suitable for all purposes, especially where high speed and difficult service are required, as in electric-light plants, rolling mills, etc. Send for Illustrated Catalogue.

—SELLING AGENTS:—  
Young & Thomas, 43 Cortlandt St., New York City.  
Harris Page, 143 & 145 N. 3d St., Philadelphia, Pa.  
Smith & Courtney, 1219 Main St., Richmond, Va.

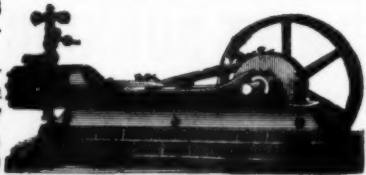
## SKINNER ENGINE CO. Erie, Pa.

Awarded **THREE GOLD MEDALS**  
by the World's Industrial and Cotton Centennial Exposition of New Orleans, La.

**MORE THAN 2700 IN USE.**

Manufacturers of **PORTABLE & STATIONARY ENGINES and BOILERS**

Including the **WELL KNOWN SKINNER PORTABLE RETURN FLUE BOILER**  
(SEND FOR ILLUSTRATED CATALOGUE AND PRICES.)



## Cleveland Ship Building Co.

SUCCESSORS TO

**Cuyahoga Steam Furnace Co.**

**CLEVELAND, OHIO.**

### BLOWING ENGINES

—FOR—

**Blast Furnaces**

**Steel Plants**

—A SPECIALTY.—

**OUR NEW BLOWING ENGINE**

NOW FOR SALE. SIZE:

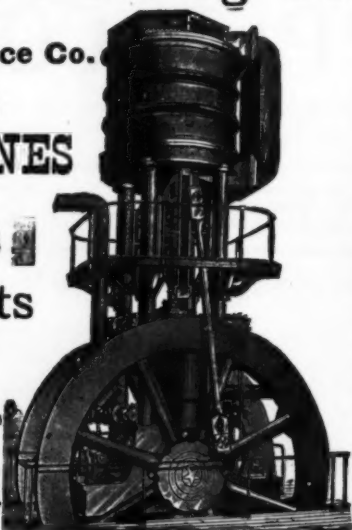
Steam Cylinder, ..... 6x24 | Air Cylinder, ..... 6x24

**STEAM HELVE HAMMERS,**

From 1,000 to 5,000 lbs.

**Engines and Boilers.**

Correspondence Solicited.



## JARVIS PATENT FURNACE

### FOR SETTING STEAM BOILERS.

Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Slack Coal, Sawdust, Logwood Chips, &c. Send for Circulars.

**Jarvis Engineering Co.,**  
A. F. UPTON, Treas. and Gen'l Manager,  
61 Oliver St., Boston, Mass.

—SOUTHERN REFERENCES:—

Bagle & Phenix Mfg. Company, Columbus, Ga.  
Anniston Mfg. Co., Anniston Ala.  
J. P. King Mfg. Co., Augusta, Ga.  
Rose Mining Co., Charleston, S. C.  
Maryland Pavement Co., Baltimore, Md.  
Brush Electric Light Co., Baltimore, Md.  
Bittick, Matocoe and Hattersea Mfg. Co's., Petersburg, Va.  
Bain Fertilizing Co., Baltimore, Md.  
Tanner & Delaney Engine Co., Richmond, Va.  
Whitely Mills, Augusta, Ga.

Graniteville Mfg. Co., Graniteville, S. C.  
Charleston Bagging Co., Charleston, S. C.  
P. H. Mayo & Bros., Richmond, Va.  
Phosphate Mining Co., Beaufort, S. C.  
Brush Swan Electric Light Co., Norfolk, Va.  
Columbus Ice & Refrigerator Co., Columbus, Ga.  
Lepoir Manufacturing Co., Lenoir, East Tennessee.  
Vandouze Mill, Graniteville, S. C.  
Charleston Electric Light Co., Charleston, S. C.

For First-Class **Steam Boilers, Stacks, Sheet Iron and Plate Work, Oil and Water Tanks,**

Address **Enterprise Boiler Co., Youngstown, O.**

## Southwark Foundry and Machine Company,

Engineers, Machinists and Boiler Makers,

**WASHINGTON AVENUE AND FIFTH ST., - PHILADELPHIA.**

—SOLE MAKERS OF—

### PORTER-ALLEN AUTOMATIC ENGINE.

—ALSO MANUFACTURERS OF—

**BLOWING ENGINES, REVERSING ENGINES, STEEL AND HYDRAULIC MACHINERY, BOILERS, TANKS, Etc.**

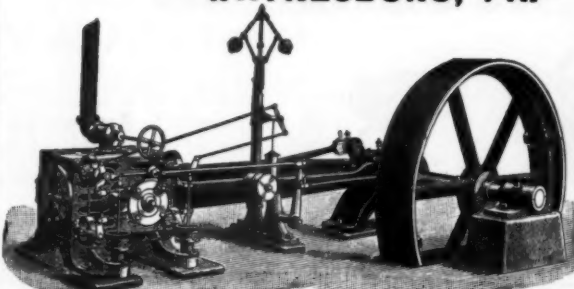
**Steam Hammers, Centrifugal Pumps & Gas Apparatus.**

INQUIRIES SOLICITED.

## ECLIPSE CORLISS ENGINES.

## Frick Company, Engineers, Builders,

—WAYNESBORO, PA.—



40 to 1,000 H. P.  
Made.

Condensing, Non-Condensing & Compound.

Send for Circular.

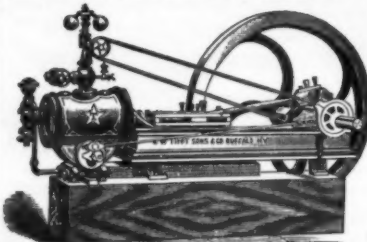
Ice-Making and Refrigerating Machinery.

Send or Ice-Making Circular.

Special Automatic Electric Light Engines, Steam Boilers, Tractors and Portable Engines, Saw Mills. Send for our General Catalogue.

## —) FOR THE LOWEST-PRICED FIRST-CLASS (— ENGINES & BOILERS

ADDRESS



**GEO. W. TIFFT, SONS & CO.**  
**BUFFALO, N. Y.**

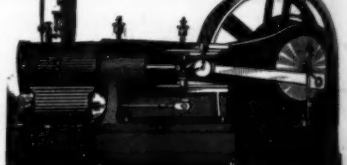
5 to 500 H. P. Special Stock Sizes 5 to 50 H. P., both Stationary and Semi-Portable.

A few good Second-Hand Engines and Boilers are for sale at an astonishingly low figure. Must be sold to make room for stock. Correspondence solicited. Mention this paper.

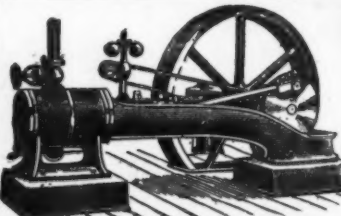
## BECK AUTOMATIC ENGINE.

For Electric Light, Flour, Cotton, Woolen and Rolling Mill Service and all other purposes requiring power. Economical in Steam Consumption. Does not race. Speed constant under varying loads and pressure of steam. Simple,

durable in construction. Requires no more space than double disc engines. Compact



taken for complete steam plants, including boilers and all connections, masonry and erection. All work guaranteed. Send for catalogue and full particulars. Also builders of Portable, Vertical and Stationary Engines. Boilers of all styles, and Saw Mills. Address **TAYLOR MFG. CO., Chambersburg, Pa.**



**WRIGHT & ADAMS CO.**  
**QUINCY, ILL.**

BUILDERS OF

### Automatic Cut-Off ENGINES

Double Drum Derrick Engines. Single Drum Reversing Engines, suitable for Mines and Rapid Hoisting.

Catalogue sent on application.

Correspondence respectfully solicited.



Strong, Well Built, Serviceable

### STEAM ENGINES

Adapted to Heavy, Continuous Work. Cost no more than ordinary Engines. For descriptive circulars, address

**Chandler & Taylor, Indianapolis, Ind.**

## Continental Boiler Scale Preventive.

Positively prevents and removes scale in steam boilers without acting on any of the metals. A real necessity for Southern steam users. Saves fuel, repairs and trouble, and doubles the life of the boiler. Sold on its merits, and satisfaction guaranteed or no pay. Write for sample.

**The Gleason Boiler Compound Co., Cleveland, Ohio.**



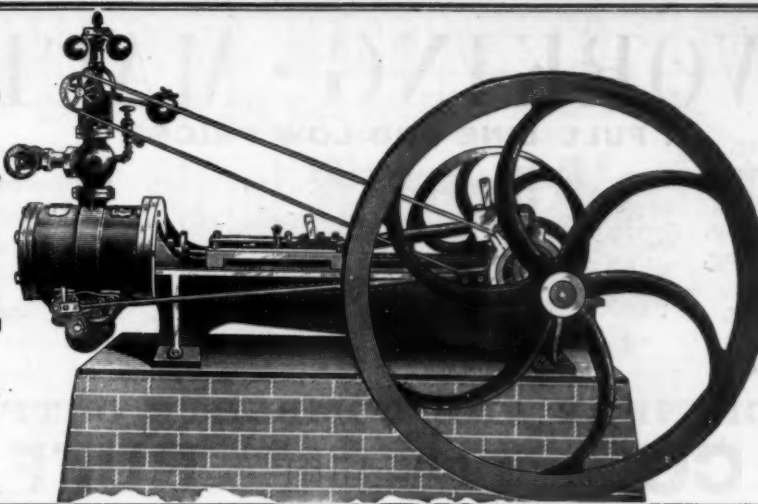
**FARRAR & TREFTS,**

ESTABLISHED 1864.

Buffalo, N. Y.

**Steam Engines,**In sizes from 4 to 50 H. P.,  
are noted for their**SIMPLICITY, DURABILITY  
and ECONOMY.**

OVER 8,000 NOW IN USE.

**Steam Boilers**

ALL SIZES,

—ARE UNEXCELLED.—

Orders filled at short notice.

**Engines and Machinery**

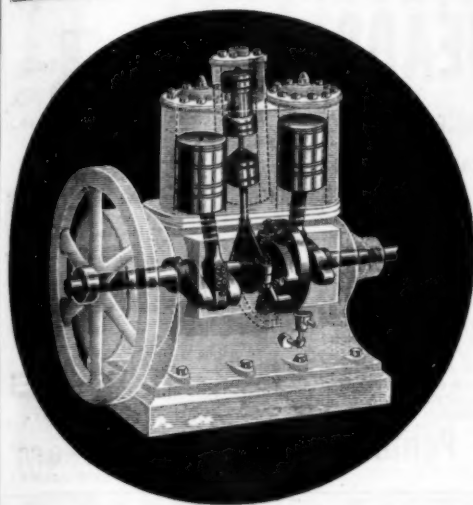
FOR DRILLING OIL AND GAS WELLS

—A SPECIALTY.—

Address

**FARRAR & TREFTS,**

BUFFALO, N. Y.

**DIVIDED POWER.**

SHAFTING { COSTS TO PURCHASE  
COSTS TO MAINTAIN } VERSUS THE  
COSTS TO LUBRICATE } Westinghouse  
COSTS TO DRIVE } ENGINE.

Independent Engines convert their whole  
power into merchantable product.

Take the Engine to the Work, not the Work to the Engine.

**THE WESTINGHOUSE MACHINE CO.**  
PITTSBURGH, PA.

The Aultman & Taylor Company, represented by Roberto  
Baker & Co., City of Mexico; Stevens, Corwin & Co.,  
118 Chambers Street, N. Y. City, with houses in Panama, C.  
A.: Lima, Buenos Ayres, Guayaquil and Valparaiso, S. A.

**SELLING DEPARTMENT  
CONTROLLED BY****Westinghouse, Church, Kerr & Co.**

17 Cortlandt Street.....New York.  
97 Fifth Avenue.....Pittsburgh.  
150 and 158 Lake Street.....Chicago.

**Fairbanks & Co.**

302 and 304 Washington Avenue.....St. Louis.  
1312 Union Avenue.....Kansas City.  
1330 Seventeenth Avenue.....Denver, Col.

**Utah and Montana Machinery Co.**

250 South Main Street.....Salt Lake.  
East Granite Street.....Butte, Mont.

**Parke & Lacy.**

21 and 23 Fremont Street.....San Francisco.  
33 and 35 N. Front Street.....Portland, Or.

**The D. A. Tompkins Co.**

36 S. College St.....Charlotte, N. C.  
46 S. Pryor St.....Atlanta,  
Georgia.

**COLUMBUS MACHINE CO., Columbus, Ohio.**

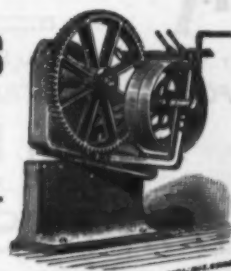
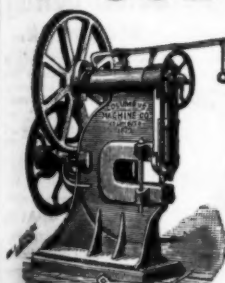
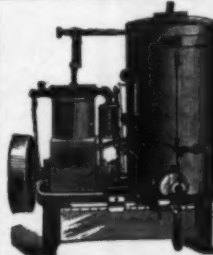
— MANUFACTURERS OF —

**Blast Furnace, Stationary, Portable AND Hoist Steam Engines**

Boilers, of all descriptions; Rolling Mills; Drop Presses; Shears for Rail, Bar and Plate  
Rolling Mills; Punches and Shears—Single or Combined; Boiler and Sheet Iron  
Rolls—Hand or Power; Boiler Makers' Shears and Punches; Shafting  
Couplings; Hangings and Pulleys.

Blowing Engines, and Blast Furnace Work in all its branches, a specialty.

Also, HEAVY CASTING AND MACHINERY WORK.

**BLAST FURNACE ENGINES ON HAND.****Foundry and Machine Dept.****Harrisburg Car Manufacturing Co.**  
HARRISBURG, PA.Engines, Boilers & Complete Power Plants.  
Highest award Silver Medal and Diploma  
at Franklin Institute Novelty  
Exhibition, Phila.We are operating the finest and most  
successful Electric Light Stations in the  
world. A change of speed not exceeding  
1 per cent, guaranteed, running light and  
loaded. Send for catalogue.**Acme Automatic Engine,**

With BRYANT'S Patent Safety Boiler.

Sizes 1, 2 and 4 H. P. Fuel, Kerosene (Coal) Oil, 120° to 150° fire test.  
No dust, ashes, or smoke. No Skilled Engineer required. "Brake" Tests  
show that 3 1/2 gals. fuel will deliver a full H. P. on belt for 10 hours, in the  
case of our 1 H. P. Engine and Boiler.

**Rochester Machine Tool Works,**  
BUILDERS, ROCHESTER, N. Y.

SEND FOR CATALOGUE.

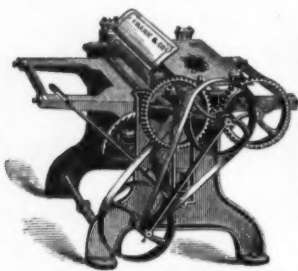
**Heavy Universal Milling Machine.**

This machine for variety and range of work has no equal, and for workmanship it has  
no superior. It will be found very valuable for builders of Locomotives, Portable and  
Stationary Engines and Pumps; Machine Tool Builders and General Machine Shops,  
as work can be done to better advantage and with greater precision than on Planers,  
Lathes, Shapers, etc. It is designed for Boring, Facing, Turning, Milling, Profiling,  
Key-Seating, Splining, Rack Cutting (any length,) Gear Cutting with the Vertical  
Attachment up to six (6) feet in diameter, etc. **Weight, 6,000 Pounds.** Smaller sizes  
of this machine are built. Circulars with full particulars on application.

**PEDRICK & AYER,**

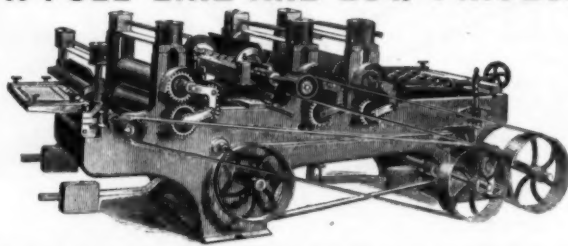
1025 HAMILTON STREET, PHILADELPHIA, PA.

# WOOD-WORKING • MACHINERY.

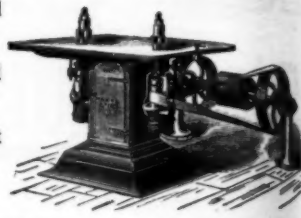


Planing,  
Matching,  
Moulding,  
Tenoning,  
Mortising,  
Boring,  
Shaping,  
Carving,  
Etc.

**A FULL LINE AND LOW PRICES.**



Write for  
new illustrated  
catalogue  
(just out) and  
our  
latest price-list  
Mention  
this paper.



**MACHINERY AND COMPLETE OUTFITS.**

**FRANK & CO.**

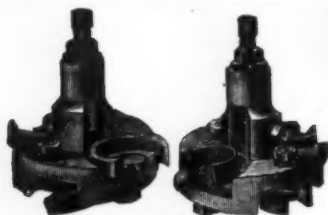
176 TERRACE STREET

**BUFFALO, N. Y.**

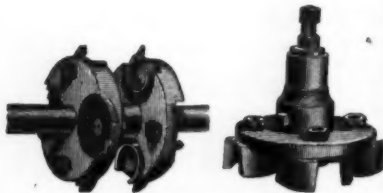
## THE SHIMER MATCHER HEADS

The Cheapest! The Strongest! The Most Durable!

AND YET THE LIGHTEST AND EASIEST RUNNING MATCHER HEADS  
IN THE WORLD. UPWARD OF 25,000 SOLD.



FLOORING MATCHER HEADS.



BOX BOARD MATCHER HEADS.



JOINTER HEAD.

The Bits are arranged in upper and lower series, and secured to a Head having seats alternately inclined for the purpose of giving the side clearance to their cutting points. This explains why these Bits hold their shape and turn out standard work until used up; the entire circle of Bit being tool cutting edge. This diagram represents a Bit (D) in the position it occupies when making a cut; the Bit (C) which follows to complete the work, is given in outline.

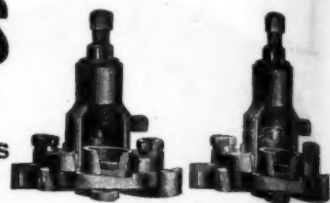


This explains the division of cut and the easy working of the tool. They finish hard, cross-grained and knotty lumber neatly, showing clean cut edges, and often save their cost in one day's run.

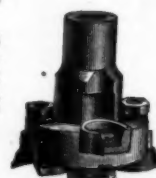
We also make SHIP-LAP HEADS JOINTER HEADS, DADO HEADS, SASH HEADS, DOOR HEADS, COPE HEADS, and Heads for any special work where a perfectly uniform pattern is required. Send for Descriptive Circular.

Samuel J. Shimer,

Milton, Penn.



SHIP LAP HEADS.



DOOR HEAD.



SASH HEAD.

## KINGSLAND & DOUGLAS MFG. CO.

ST. LOUIS, MO.

FULL LINE OF  
PORTABLE, DETACHED and STATIONARY  
Steam Engines

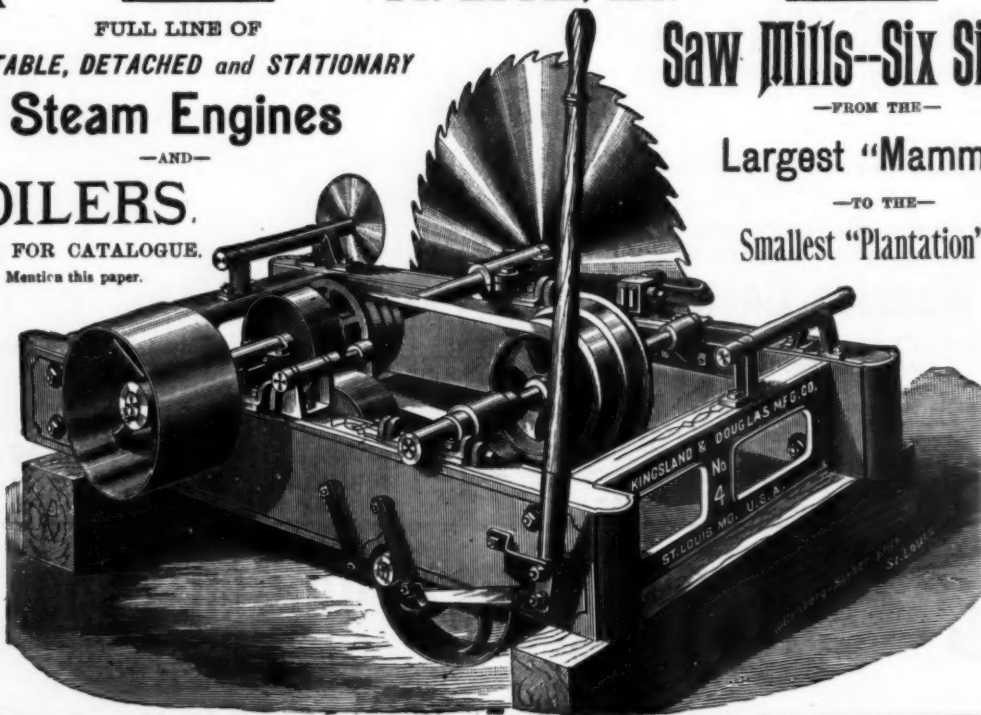
—AND—  
BOILERS.

SEND FOR CATALOGUE.  
Mention this paper.

Saw Mills--Six Sizes.

—FROM THE—  
Largest "Mammoth"

—TO THE—  
Smallest "Plantation" Mill.



BEACH'S NEW  
Scroll Sawing  
MACHINE.

3,000 in use; made in four styles; price to suit everybody; even trials; a jar; air pump, and every known improvement. You can stop, change the saw and start in four seconds. Roll tilting and stationary table. Mention this paper and send for catalogue and price. You can't afford to buy any else. Address, H. L. BEACH, Smith Street, Morristown, Susquehanna Co., - Penn.

**SAWS**

Inserted Point Edger Saw.



SIMMONS MFG. CO.  
PITTSBURGH, MASS. - CHICAGO, ILL.

Inserted Point Board Saw.

**MACHINE**

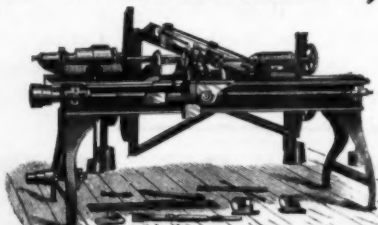
## FRANK H. CLEMENT, Manufacturer of WOOD-WORKING MACHINERY.

—FOR—

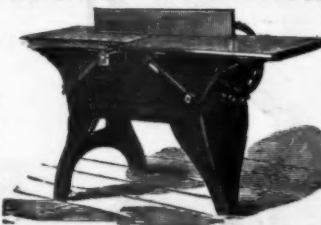
Furniture, Chairs, Cas-  
kets, Carriages,  
★ Sleighs, &c. ★

FIRST-CLASS WORKMANSHIP.  
SEND FOR CATALOGUE.

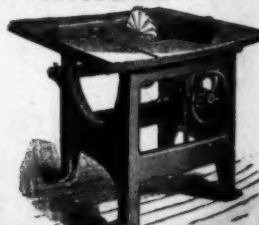
215 Mill Street  
ROCHESTER, N. Y.



Patent Automatic Lathes



Patent Buzz Planers or Joiners.



No. 2 New Bench.





Sash Mortiser and Relisher.

# WILLIAMSPORT MACHINE CO., Limited,

COR. WEST 3D AND WEST STREETS, WILLIAMSPORT, PA.

MANUFACTURERS OF

## Improved Wood-Working Machinery.



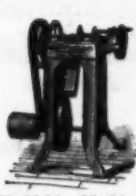
Hand Planers.



Blind Slat Re-Saw.



Blind Slat Tenoner.



Pin Making Machine.



Band Saws.



Double Spindle Shapers.

# LEVI HOUSTON, Wood-Working Machinery.

Planers, Matchers, Panel Planers, Moulders,  
Slat Saws, Stickers, Boring Machines, Tenoners, Swing Saws, Mortisers,

Panel Raisers, Sash Dovetailing Machines,

SAND PAPERING MACHINES,

Blind Rabbeting Machines, Etc.

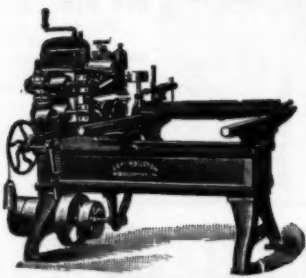
On the Philadelphia & Erie and Philadelphia & Reading Railroads.

MONTGOMERY,

Lycoming Co., Pa.



SASH MORTISER.



DOOR TENONER.



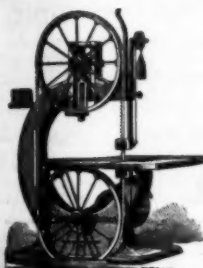
SASH TENONER.



DOOR MORTISER.

# CORDESMAN MACHINE CO.

MANUFACTURERS OF A COMPLETE LINE OF



No. 3 Band Saw.

MODERN  
DESIGNS.



No. 2 Mortiser.

NEW IN  
CONSTRUCTION.



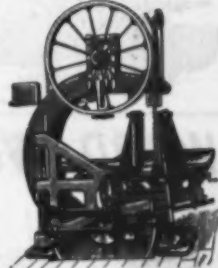
No. 2 Scroll Saw.

UNEQUALED  
IMPROVEMENTS.



Swing Saw.

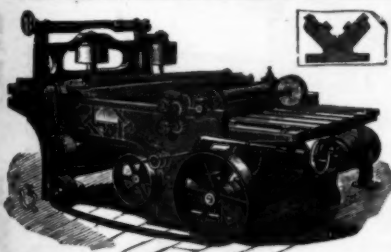
ECONOMICAL  
IN OPERATION.



No. 4 Scroll and Re-Saw.

## Wood-Working Machinery.

PEARL AND BUTLER STS. Cincinnati, O., U. S. A.



Diagonal Planer and Polisher.



# ROWLEY & HERMANC

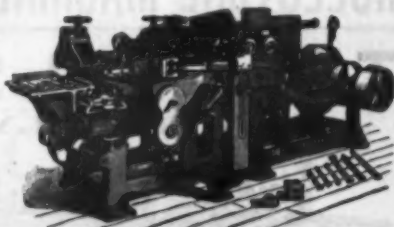
WILLIAMSPORT, PA., U. S. A.

Manufacturers of the Finest and Most Complete Line of

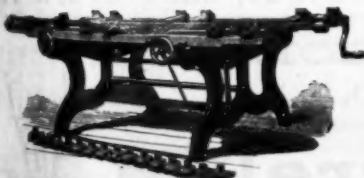
## Wood-Cutting Machinery

IN AMERICA.

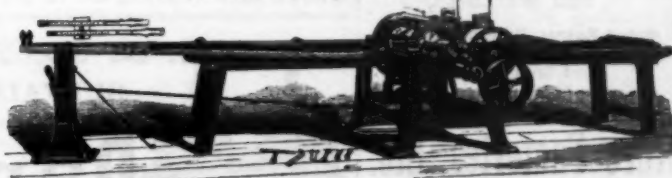
Write for Illustrated Catalogue and Special Prices.



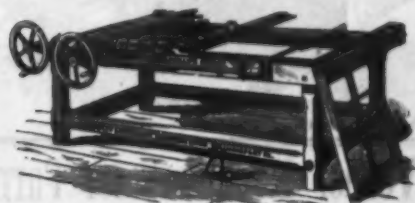
Improved 9-inch and 10-inch Moulder.



Patent Door and Blind Clamp, with or without Sash Attachment.



No. 1 New King Power Feed Gang Rip Saw.



Phillips Patent Sash Clamp.

# THE MANUFACTURERS' RECORD

is the most thorough, complete and authentic source of information on Southern industrial affairs in existence. The subscription price is only \$4.00 a year. Some of our subscribers think every issue is worth that much. Try it for a year. Send in your subscription to-day. Don't wait until to-morrow; you may forget it.

THOS. P. EGAN, Presd.

EDWIN RUTHVEN, Secy.

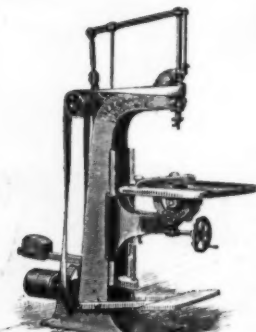
FREDERICK DANNER, Supt.

# Wood-Working Machinery

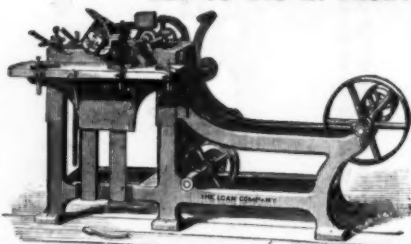
The Largest and Most Complete Line in the United States is Manufactured by

## THE EGAN COMPANY,

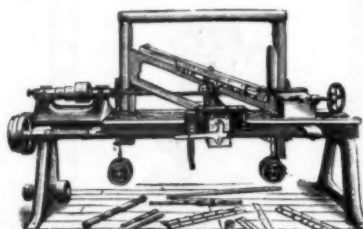
228 TO 248 W. FRONT STREET, CINCINNATI, OHIO, U. S. A.



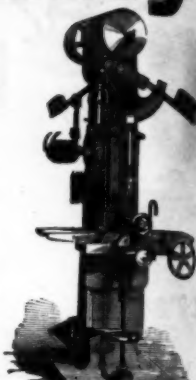
Vertical Boring Machine.



6-inch Sticker.

Complete Outfits  
Furnished.Send for Catalogue  
and Prices.

Automatic Gauge Lathe.



No. 4 Mortiser.

## CORDESMAN, MEYER & CO.

171 and 173 West Second Street, CINCINNATI, OHIO.

FINE GRADES OF LATEST

### Wood Working Machinery

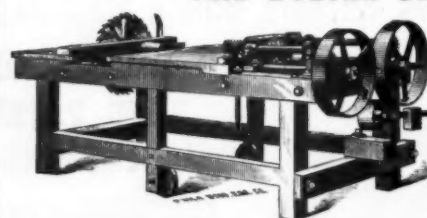
OF EVERY DESCRIPTION.

Planing Mills, Furniture and Chair Factories,  
Carriage, Wagon and Agricultural Works.

Write for our latest Catalogue and Price List. Correspondence solicited.



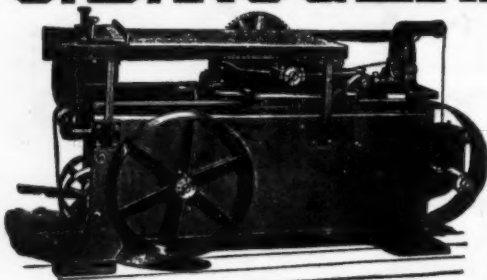
## THE LATEST IMPROVED GANG LATH MILL AND BOLTER COMBINED.

New Lath Packer and Trimmer.  
Trim your Lath and get better prices  
and ready sales.Shingle Machines,  
Shingle Bolter and Sapper,  
Drag Saw Machines, etc.At prices all can afford. Send for circular  
and prices to

ABBOTT &amp; THURBER, Olean, N. Y.

Best machine in America for the price.  
MENTION THIS PAPER.

## C. B. ROGERS & CO.

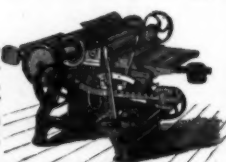


### Wood-Working MACHINERY.

Planers, Moulders, Mortising,  
Tenoning, Hand  
Planing Machines.  
Band and Scroll Saws,  
Wood Lathes, etc.Manufactory at Norwich, Conn.  
Wareroom, 109 Liberty St., N. Y.

## WOOD WORKING MACHINERY

—FOR—

Planing Mills, Box,  
Sash, Door and Blind  
Factories, Furniture,  
Cabinet and Chair  
Works, Car Works  
and General Wood  
Workers.

## ROLLSTONE MACHINE CO.,

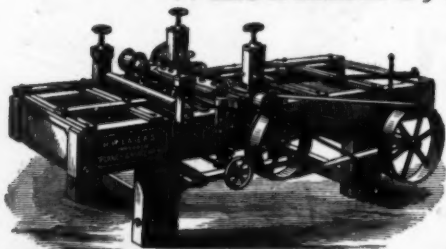
44 Water St.,  
FITCHBURG, MASS.

## T. V. & V. C. STILLMAN,

WESTERLY, R. I. MANUFACTURERS OF

Wood-Working

### MACHINERY.

Woodworth Planers  
and Matchers,Molding Machines, Mortisers, Circular Saw  
Arbors, Rotary Planers for Wheel  
and Carriage Makers.

Shafting, Pulleys, &amp;c., to Order.

Send for Circular.

## Veneer Machinery for Furniture Factories, Etc.



Rotary-Cutting Veneer Machines.

Strong, Solid, Durable, Accurately  
Made, Double Drivers, Positive  
Feed, Complete Adjustment,  
Automatic Change of  
Pitch.

Correspondence solicited.

## COE & WILKES,

Painesville, Ohio.

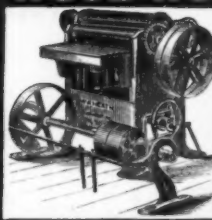
## W. A. HEATH,

BINGHAMTON, N. Y.

MANUFACTURER OF

### WOOD WORKING MACHINERY

OF ALL KINDS.

SHAPERS, BIT MORTISERS,  
IMPROVED GAUGE LATHES,  
PONY PLANERS,  
ROD, PIN OR DOWEL MACHINES, ETC.

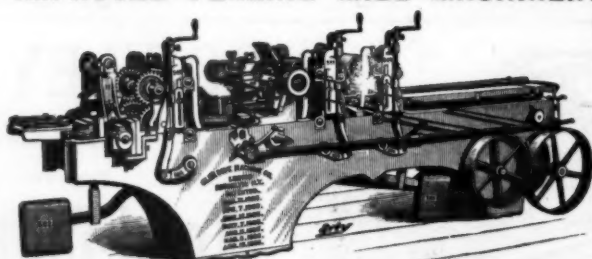
CHAIR MACHINERY A SPECIALTY.

SEND FOR CATALOGUE A.

## Glen Cove Machine Co., Limited,

—MANUFACTURERS OF—

### IMPROVED PLANING MILL MACHINERY.

No. 2.—Fast-Feed Planing and Matching Machine. 13 feet 9 inches long. Weighs 8,700 pounds.  
Heavy Fast Feed Planing and Matching Machines, Double Surfacers,  
and Inside Molding Machines a Specialty.

Office and Works, 24 to 30 CLAY ST., BROOKLYN, N. Y.

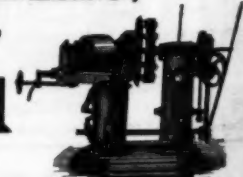
## E. & B. HOLMES,

BUFFALO, N. Y.,

MANUFACTURERS OF



### Barrel MACHINERY.

Chamfering, Howeling and Crozing Machines, Stave Dressers, Stave Jointers, Hoop Drivers,  
Crozing Machines, Heading Jointers, Heading Dressers, Beer Stave Benders, Stave Outlets,  
Leveling and Trussing Machines, Cylinder Stave Saws, Heading Saws, etc.

—STAVE, BARREL, KEG AND HOGSHEAD MACHINERY.—

See cuts of our WOOD-WORKING MACHINERY in the first issue of each month.

Correspondence solicited. Mention this paper.



# RILEY & GRAY,

BUILDERS AND IMPORTERS OF

## Cotton Machinery,

Also, WOOLEN AND WORSTED MACHINERY.

OPENERS, LAPPERS, ROLLER AND REVOLVING FLAT CARDS, DRAWING FRAMES (over 17,000 Deliveries, Working with Electric Stop Motion), SLUBBING, ROVING, SPINNING FRAMES AND MULES, WARPERS, SLASHERS, Etc., Etc.

Needle Pointed Tempered Steel **CARD CLOTHING.**  
READY GROUND

A Great Success. TRY IT! Over 70 New England Mills now using it. Cuts, Descriptive Circulars, Estimates, Etc., on request.

19 PEARL STREET, — — — — — BOSTON, MASS.

## PLATT BROTHERS & CO., LIMITED.

# MACHINISTS.

HARTFORD WORKS, OLDHAM, LANCASHIRE,

*Be to call the attention of Worsted Spinners and Manufacturers to their Improved Machinery for*

Carding, Combing, Preparing, Spinning and Weaving Worsted on the French System.

PLATT BROTHERS & CO., Limited, ARE ALSO MAKERS OF THE FOLLOWING MACHINERY:

New Patent Cleaning Machines for Cotton. New Bale Breaker.  
Crighton's Patent Opening Machines for Cotton.  
Improved Hard Waste Breaking-up Machinery, of any Number of Cylinders.  
Patent Burring Machines for Wool.  
Machinery for Preparing, Spinning and Doubling Worsted Yarns on the English and French Systems.  
Machinery for Preparing, Spinning and Doubling Cotton, Wool and Silk.  
Ring Spinning and Doubling Machines.

Combing Machines for Cotton.—Heilmann's or Whipple's Patent.  
Patent Brick-making Machinery.  
Combing Machines for Wool, Worsted, &c.—Little & Eastwood's Patent.  
Machinery for Carding and Spinning Silk Waste.  
Power Looms for all Descriptions of Plain and Fancy Cloths in Cotton and Wool.  
Sizing, Dressing, Warping, Beaming, Winding and Reeling Machinery.  
Cloth-folding and Measuring Machines.  
Hydraulic and Cam Bundling Presses for Yarn and Cloth.

Also Makers of PATENT MACARTHY COTTON GINS, Hand or Power, for long or short-stapled Cottons.

P. B. & Co. Lt. desire to call the attention of Cotton Spinners to their Improved Self-Stripping Revolving Iron Flat Cards.

FOR FURTHER INFORMATION AND PRICES APPLY TO

## SAMUEL WOOD, Agent, 123 Chestnut Street, Philadelphia.

Agent for Thompson & Co.'s English Card Clothing of all kinds for Wool, Cotton and Worsted. Ramadan's Patent Hardened Tempered Steel Wire, Plain and Tin Plated, a specialty.



### DROP BOX PICKERS.

Our Parker Patent Drop Box Pickers have no plug in the shuttle-strike to knock out, as the blow is against the edge of the hide forming the body of the picker, and we guarantee they will not break off at the head. Samples mailed on receipt of a slightly worn Picker.

LOOM PICKER CO., Biddeford, Maine.

WE MAKE ALL KINDS OF LOOM PICKERS AND LOOM HARNESSSES.



### WALMSLEY'S DEVICE

For Raising and Supporting the Guide Board or Ring Frames and Twisters. In Fall River alone it is used on over 400,000 spindles, or 97 per cent. of all the ring frame spindles in the city. Outside of Fall River its use is scattered from Maine to Delaware, over 400,000 more. Anyone can put them on, being very simple, and its cost nominal.

For prices and information please address

R. WALMSLEY, FALL RIVER, MASS.

Patented Jan. 26, 1886.

## BROWN & KING, MANUFACTURERS OF COTTON MILL SPECIALTIES.

Roller Covering, Loom Pickers and Strapping.

Dealers in Roller Coverers, Stock and Tools; Cotton and Woolen Mill Supplies

Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.

Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated A. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve.

Johnson's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c.

Office and Salesroom, No. 62 S. Broad Street, ATLANTA, GA.

## LOWELL CARD CO.

### CARD CLOTHING of Every Description,

— Set With Round, Angular, Double-Convex Iron or Steel Wire. —  
LOWELL, MASS.

Patent Needle Pointed **CARD CLOTHING,**  
Hardened and Tempered Steel Wire  
For COTTON and WOOLEN MILLS.

T. K. EARLE MFG. CO. WORCESTER, MASS.

## CHARLES F. TAYLOR,

Manufacturer of **Patent Machine Paper Cop Tubes.**

These Tubes are used in a large number of Leading Mills, including  
Lonsdale Company, Lonsdale, R. I.  
Social Manufacturing Co., Woonsocket, R. I.  
Manville Company, Manville, R. I.  
Harmony Mills, Cohoes, N. Y.  
Utica Steam Cotton Mills, Utica, N. Y.  
The New York Mills, New York Mills, N. Y.  
Atlantic Manufacturing Co., Manchester, N. H.  
Pacific Mills, Lawrence, Mass.  
Atlantic Cotton Mills, Lawrence, Mass.  
Lacina Company, Biddeford, Me.  
Bates Manufacturing Co., Lewiston, Me.  
Lockwood Company, Waterville, Me.  
Tubes furnished promptly for all makes of spindles, American or foreign. Address

CHARLES F. TAYLOR, 5 Custom House St., Providence, R. I.

## DON'T · FORGET ·

THAT WE BUILD THE BEST MACHINES IN THE MARKET  
FOR EXTRACTING THREADS FROM SPINNERS' WASTE,  
AND FURNISH THEM ON TRIAL, SUBJECT TO APPROVAL.

Write for Prices. **KITSON MACHINE CO., Lowell, Mass.**

## The DEANE STEAM PUMP CO.

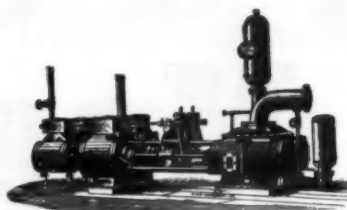
—HOLYOKE, MASS.—

BUILD

STEAM \* PUMPING \* MACHINERY

OF EVERY VARIETY.

Send for New Catalogue No. 22.



## The DEANE STEAM PUMP CO.

NEW YORK, BOSTON,

CHICAGO, PHILADELPHIA, ST. LOUIS,

MAKE A SPECIALTY OF

Water Works **ENGINES**

FOR THE SUPPLY OF CITIES AND TOWNS.

## WORTHINGTON STEAM PUMPS

SOUTHERN SELLING AGENTS:

THOS. C. BASSHORE &amp; CO., Baltimore, Md.

KENTUCKY MACHINERY CO., Louisville, Ky.

W. H. PERRY'S MACHINE WORKS, Nashville, Tenn.

LIVERMORE FDRY. &amp; MACH. CO., Memphis, Tenn.

Boston

Philadelphia

SEND FOR ILLUSTRATED CATALOGUE

HENRY R. WORTHINGTON  
NEW YORK.

Chicago

St. Louis

SOUTHERN SELLING AGENTS:

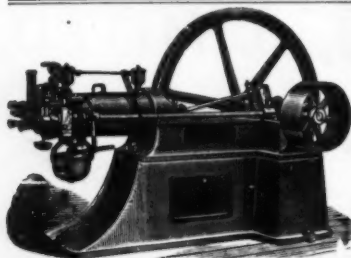
SMITH &amp; COURTNEY, Richmond, Va.

MECKLENBURG IRON WORKS, Charlotte, N. C.

E. V. WHITE &amp; CO., Norfolk, Va.

M. SCHWARTZ, New Orleans, La.

San Francisco



Over 18,000 in Use.

## Otto Gas Engine

30 to 70 per ct. less in consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

Guaranteed to Consume 25 to 75 Per Cent. less Gas than any other Gas Engine Doing the same Work.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &amp;c. Sizes: 1 to 35-Horse power.

Branch Office, 130 Washington St., Chicago.

OTTO GAS ENGINE WORKS, Schleicher, Schumm &amp; Co.

33d &amp; WALNUT STS., PHILADELPHIA.

## WE MANUFACTURE

Automatic Sprinklers,  
Roving Frames,  
Rabbeth, Sherman, } Spindles,  
Whitin, Sawyer, }  
Double Adjustable Spinning Rings,  
Twisters, Spoolers, Reels,  
Spooler-Guides,  
Bobbin-Holders,  
Banding Machines,Slasher } Warpers,  
Chain }  
Warpers } Creels and Beams,  
Reeds and Combs,  
Stop Motions & Clocks,  
Balling Machines,  
Slasher Cut-Markers,  
Separators } Doyle,  
Sharples,Lever Screws for Roving and  
Spinning Frames, Lifting-Rod  
Cleaners, Traveller Brushes.  
Temples } Dutcher, } With Latest  
Hardaker, } Improvements.  
Shuttle Guards, Durkin's  
Thick and Thin Place Preventer,  
Getchell's Improved Thompson  
Oil Can, Belt Hole Guards.Milled Machine Screws,  
Special Milled Work  
of all kinds, etc., etc.

## REPAIRS

For Spindles, Temples and all  
our Machinery furnished  
at short notice.

Send for Prices.

GEORGE DRAPER &amp; SONS, HOPEDALE, MASS.

TELEGRAPH ADDRESS AND RAILROAD  
STATION, MILFORD, MASS.

## FRICTION DRILL

Tested Four Years Before Placing on the Market. Superseding the Ratchet.

Machinists, Boiler Makers, Mechanics and all parties having use for a Ratchet will find this Drill a great saving of time. Can be used in contracted places where a Ratchet cannot. Send for Illustrated Circular and Price List. Mention Paper.

F. F. WATERS MANF'G CO.

38 OLIVER STREET, BOSTON, MASS.



Instantaneous Clutch. No Lost Motion. Machine.

CHEAPEST

## PIPE &amp; BOILER COVERINGS

JNO. A. McCONNELL & CO., 119 Water St., Pittsburg, Pa.  
SECTIONAL AND PLASTIC. PAMPHLET AND SAMPLES FREE. NAME THIS PAPER.The York Ice and Refrigerating Machines York Mfg. Co.  
YORK, PA.

## ALEXANDER BROWN &amp; SONS, { ESTABLISHED 1811 } BALTIMORE. Transact a General Foreign and Domestic Banking Business.

Buy and sell Bills of Exchange on Great Britain, Ireland, and other foreign points. Issue Commercial and Travelers' Credits in Sterling, Francs or Dollars, available in any part of the world. Make Telegraphic Transfers of Money between this and other countries. Make Collections.

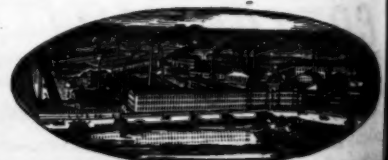
BROWN BROTHERS &amp; CO., New York, Philadelphia and Boston.

BROWN, SHIPLEY &amp; CO., London and Liverpool.

## Washburn &amp; Moen Mfg. Co., Worcester, Mass.

MAKERS OF IRON AND STEEL

MANUFACTURERS OF



Iron, Steel and Copper Wire, Wire Rope, Barbed Wire. Chicago Washburn, 207 Lake Street. New York Washburn, 100 Nassau Street.



# Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE  
MANUFACTURERS' RECORD CO.

R. H. EDMONDS, EDITOR.

—OFFICE—

COR. EXCHANGE PLACE AND COMMERCE STREET  
BALTIMORE.

SUBSCRIPTION \$4.00 A YEAR.

BALTIMORE, APRIL 7, 1888.

## WHAT ADVERTISERS SAY.

**F. F. Adams Co., Manufacturers of  
Patent Household Articles.**

ERIE, PA., March 10, 1888.

Editor Manufacturers' Record:

The "ad." we have in your paper we consider one of the best investments we have made this year. We are receiving numerous enquiries from first-class houses, asking for catalogues and best cash prices. This is our second year with you, and we can trace a number of our orders direct to our "ad." in the Record. We have tried other papers who claim to reach the trade we are seeking, and have settled on the MANUFACTURERS' RECORD as being superior to all others for Southern trade. Yours truly,  
THE F. F. ADAMS CO.

**Cordesman Machine Co.—Wood-  
Working Machinery.**

CINCINNATI, O., January 30, 1888.

Editor Manufacturers' Record:

Our "ad." with your journal has been running but three months, but from the solid returns received in this brief time we are constrained to say that in none of our other contracts made to reach the Southern trade have we found the practical results yours has afforded us. Truly yours,  
CORDESMAN MACHINE CO.

**Office Board of Trade.**

LOUISVILLE, KY., January 23, 1888.

Editor Manufacturers' Record:

Very testimony was needed to the value and efficiency of the MANUFACTURERS' RECORD as an advertising medium my own experience might furnish it. On Saturday, the 21st, the MANUFACTURERS' RECORD published a very complimentary notice of the splendidly-printed book, "The City of Louisville and a Glimpse of Kentucky," just issued by the Board of Trade here for free distribution. On Monday morning, when I reached my office, there were 18 letters awaiting me, each referring to the MANUFACTURERS' RECORD's notice and asking for a copy. Before night the number of letters had increased to more than 30. These letters were from Illinois, South Carolina, North Carolina, Alabama, Tennessee, Virginia and Indiana. I expect an avalanche during the week.  
YOUNG E. ALLISON.

**Ideal Manufacturing Co.**

NEW HAVEN, CONN., January 18, 1888.

Editor Manufacturers' Record:

We are very much pleased with the result of our experimental advertisement in the RECORD. We only had four issues, every other week, and have received 53 bona fide enquiries from three issues. You may make out contract for one year. Yours truly,  
J. H. BARLOW,  
Manager Ideal Manufacturing Co.

**F. F. Waters Manufacturing Co., Manu-  
facturers of Smith's Patent  
Friction Drill.**

BOSTON, MASS., February 4, 1888.

Editor Manufacturers' Record:

It gives us pleasure to state that our "ad." in the MANUFACTURERS' RECORD has brought us, on the average, about 30 letters per month. We consider it a paying investment. Respectfully,  
F. F. WATERS MFG. CO.

**Cordesman, Meyer & Co., Manu-  
facturers of Wood-Working  
Machinery.**

CINCINNATI, O., January 11, 1888.

Editor Manufacturers' Record:

We are highly pleased with the returns from our advertisement in your journal, and take pleasure in commending it to others in our line as a valuable medium for reaching the trade. Yours very truly,  
CORDESMAN, MEYER & CO.

"FARM MACHINERY," of St. Louis and Kansas City, is one of the growing industrial papers of the country. It is devoted entirely, as its name implies, to farm machinery—a field that is as wide as any journal could desire. Every maker and dealer in farm machinery will find it of interest.

## An Expert's Testimony.

There are probably few men in America better posted in all the requirements of iron making than Mr. Fred. W. Gordon, the celebrated furnace builder, of Philadelphia. Mr. Gordon is a noted expert, and his firm has built many of the finest furnaces in the country. Some months ago he wrote for the MANUFACTURERS' RECORD an article on the possibilities of iron making in the South which astonished many who did not fully realize the unequalled advantages of that section for this industry. Recently he has given, in an interview published in the Nashville American, some additional facts of interest.

"It has been the policy of the Southern people, in fact," said Mr. Gordon, "to put up nothing but the best furnaces, and they are very much superior on the average to those of the North. Of course this is due to the fact that they are all new plants, while many of the Northern are old ones. There is no country in the world that has advanced so rapidly in manufacture as Southern Tennessee, North Alabama and a portion of Georgia within the last few years.

Though this section of the South will have a capacity of about 1,125,000 tons of pig iron per annum, the ore and coal fields and the timber will far exceed the requirements, and it is true that many of the companies might go on trebling their capacity and yet have practically perpetual stores of minerals to draw upon. There is no question but this section of the South can produce iron cheaper, I am sure, than any other large section of the country. For lack, however, of manufacturing enterprises to consume their production, the price of pig iron at these Southern furnaces is fixed at the market price of the North, less freights. Hence the great inducements for manufacturers to establish themselves in this section, whence the goods for one freight cost could be distributed throughout the country. In many localities of this section fuel is cheap, and no class of product employing large quantities of iron and timber but would find it advantageous to establish themselves in this section. With cheap bituminous coal, gas can be manufactured per unit of heat, to be utilized in all iron manufacturing processes, at considerably lower cost than natural gas is sold at in Pittsburg, and everything made out of wrought iron could be made in the South cheaper than it could be at that famous iron city."

THE Star, of Wilmington, N. C., wants to know how the statistics of the South's agricultural productions, given in our issue of March 24, were obtained. If the Star had read the article carefully it would have seen it distinctly stated that they were compiled from the reports of the United States Department of Agriculture and the census.

## "History Teaching By Example."

On the 14th of May, 1882, Prince Bismarck addressed the Reichstag in favor of establishing a protective policy for Germany. To give the highest effect to his argument, he cited the example of the United States, saying:

"The success of the United States in material development is the most illustrious of modern time. The American nation has not only successfully borne and suppressed the most gigantic and expensive war of all history, but immediately afterwards disbanded its army, found employment for all its soldiers and marines, paid off most of its debt, given labor and homes to all the unemployed of Europe as fast as they could arrive within its territory, and still by a system of taxation so indirect as not to be perceived, much less felt. \* \* \* Because it is my deliberate judgment that the prosperity of America is mainly due to its system of protective laws, I urge that Germany has now reached that point where it is necessary to imitate the tariff system of the United States."

When those notable words were spoken, they described what this country had achieved during a period in which the South had been slowly recovering from the disasters of the war and getting ready to engage in the diversified industries for which its natural resources afforded grand opportunities. These resources had been shown to the world at the Atlanta Exposition but a few months prior to the speech of Prince Bismarck, and an interest had been awakened in them which has since led to the mighty industrial movement which from week to week the MANUFACTURERS' RECORD has delighted to chronicle. Two months hence, six years from the date of the address to the Reichstag, were the illustrious German to recite to that body the facts about the South, he would present a more powerful argument for protection than he did in 1882, for during those six years the industrial development of that devastated and impoverished section of the United States has been the most remarkable in human history. He would have to tell of thousands of miles of railroads completed, of hundreds of millions of dollars invested in mining and manufacturing enterprises, of flourishing cities, equipped with all the appliances of modern civilization, that have been built, where, at the time of his first speech, there was a sparsely settled agricultural region far removed from all populous centres, covered in large part with virgin forests, and as little known to the majority of Americans as are the wilds of Alaska or the sombre recesses of the Black Forest.

Should Bismarck study the subject to-day with the intention of making such an address, what would be the astonishment of that sturdy statesman to learn that there were men representing the South in the American Congress who were striving with all their might to strike down the laws under whose protection this wonderful prosperity had been possi-

ble? "Have they gone mad?" he would wonder, "or are they all old men, devoted to past memories, who have outlived their time and are unable to understand the forces and movements of this stirring progressive age?" Such thoughts as these would run rapidly through the brain of the astute German chancellor. And who can wonder? Certainly not the earnest, progressive men of the South, who look with astonishment and indignation at the determined efforts of some Southern Congressmen to break down the barriers of protection. Men of this class make no attempt to disguise their feelings, but are boldly outspoken in their denunciations of the folly and madness of such Congressmen. The press that represents the New South daily reiterates their expressions of alarm and indignation. The Atlanta Constitution, one of many brave and earnest papers in the South that are ably advocating protection, recently condensed the whole argument in a paragraph by saying:

"Slavery and its environments compelled the South to favor free trade. Its capital was invested in land and negroes, and the result was that when circumstances drove the two sections into an armed contest, the South was practically at the mercy of the section that had been developing its material resources and its industries. All this is history, but it points its own moral. Free trade means dependence; protection means independence."

The question for the Southern people to determine is here clearly presented. Do they wish to abandon their present hopeful progress and become dependent? Then let them support the Congressmen who are doing their best to destroy the tariff and to retain the odious internal revenue system. Do they wish independence and prosperity? Then pursue the opposite policy. The final decision between free trade and protection rests in large measure with the South.

THE agitation of the question of the purity of lard, originated with some of the lard refiners in a spirit of opposition to cotton oil, seems to be leading to the following conclusions:

That there is nothing whatever in cotton oil to make it objectionable as a food product, either mixed with lard or otherwise.

That it is a pure vegetable oil, and that the processes of its manufacture are such as to insure absolute cleanliness.

That, if properly refined, it may be made to serve any purpose for which olive oil will serve.

That, while we do not believe all the charges made against the lard refiners, it is demonstrated that the material from which much lard is made may be unclean or diseased, excepting only the cotton-seed oil put into it.

That the promoters of the agitation would be well pleased to draw out of a fight and admit that cotton-seed oil is the very best ingredient with which the bulk of lard may be increased.

That there is a fortune in store for some smart wholesale grocer who will buy properly refined cotton seed oil and put it up in packages for the retail market and label it "pure cotton-seed oil—guaranteed unadulterated by any animal grease."



### American Industries in Jeopardy

The North American Review this month devotes many pages to brief statements, made over their own signatures, by men eminent in the leading industries of the United States. In his able introduction, Mr. Allen Thorndike Rice says: "The main legislative issue before the country today is unquestionably the tariff issue. Since the war of the rebellion no question so momentous or so threatening of disquiet and danger has been appealed to the judgment of the American people." The contributors of the various papers all entertain the same conviction, and give solid business reasons for doing so. First of these is Mr. B. F. Jones, of Pittsburg, Pa., who says: "The effect of the tariff legislation recommended by the President in his recent message would be disastrous to the iron and steel industries of the country, as have been the attempts to carry out such lame theories in the past." Some instances of these disasters are cited, especially those that followed the enactment of the tariff of 1846, when 90 per cent. of the iron manufacturers of Pennsylvania were driven into bankruptcy, and the skilled mechanics of Pittsburg, "thoughtful men, with strong arms and willing hands, were reduced to idleness and want, \* \* and were compelled to accept the charities of the more fortunate, and get from the soup stations, established for the purpose, sustenance for themselves and their families. \* \* These dire consequences were not confined to the iron interests, but affected all branches of industry alike throughout the country." Against this sad history Mr. Jones refers to the wonderful development of this country since 1860, to the comfortable homes of our workmen, and to the grand aggregate of deposits in savings banks as "indubitable testimony in behalf of a protective tariff."

Iron ore, and the probable effect upon the mining industry by the adoption of President Cleveland's recommendations, is considered by Mr. George H. Ely, of Cleveland, Ohio, in a calm, dispassionate discussion. "In the production of last year's grand aggregate of American iron and steel, there were used 12,500,000 tons of iron ore," of which "about 11,300,000 tons were raised from American mines and carried by American ships and railroads to the furnace and the mill," while the balance, 1,194,301 tons, came from foreign countries, paying a duty of seventy-five cents a ton. "Every ton of these importations displaced a ton of American ore" to the loss of the Middle States, Lake Superior and Missouri miners. Southern ore industries, newly born, will soon feel the same pressure, the same loss of market. Hampton Roads will be the entrepot for foreign ores into Southern ore fields. Instead of free ore from abroad, mined by laborers who earn less than a third of what is paid

for the same kind of work in this country, there should be an increase of duty to eighty-five cents per ton, to prevent the displacement of American iron. "The iron ore of commerce," says Mr. Ely, "is distinctively a product of enormous combinations of capital and labor. Its designation by theorists as 'raw material' does not change its relations to the expended capital and labor, nor can such arbitrary and purely constructive classification, to suit certain theories, impair its right to full protection."

Senator Jonathan Chase, of Rhode Island, explains clearly the danger to American cotton manufacturers if the administration's tariff policy should be adopted. "The demand for home consumption of the cheaper and coarser grades of cottons was long ago fully met by the American manufacturer, and so close and sharp is the competition that none but the very best mills under the ablest management have been able to work at a profit, some both North and South having gone into bankruptcy. \* \* \* There is no outlet at home or abroad for an increased production of coarse fabrics. In the medium grades the same conditions exist. \* \* \* The American consumer is cheaply supplied with every grade of cotton goods. About one-fifth of the spindles of the country are making the finer grades of goods against which the foreigner maintains a sharp and quite successful competition in our own market." Senator Chase gives the value of the importations last year of the finer grades of fabrics and yarns as \$29,150,058.83, and claims that any material reduction in present duties "would enable the foreigner to drive the domestic manufacturer out of the market unless he could find some means of cheapening the cost of the goods." "The plant is fixed. Taxes and interest cannot be reduced. If these fine mills should be turned upon the coarser fabrics the market would be glutted, and all would go to ruin together. There would be but two methods of meeting the emergency—to stop a part of the machinery or reduce the wages of labor until the cost of the goods was at an equilibrium with those imported." The attempt to do either, the Senator believes, would result in a protracted contest, and eventually in "a financial crippling and final stoppage of many establishments, operatives thrown out of employment, failure of traders who supply the work people, and of merchants and bankers who deal with the manufacturers." We get large quantities of fine cotton fabrics from Great Britain, France and Switzerland. "A very small reduction of duties would enable them to increase largely the quantity thrown upon our market, stopping our mills, throwing labor out of employment, with resultant injury that would not stop with those directly interested." The Senator

concludes his argument with the following philosophical and patriotic paragraph:

"All kinds of business in a country are interdependent, and any material injury to one must sooner or later be felt by all, just as when you drop a pebble into the pond curling ripples reach the shore on every side and every drop of water becomes disturbed. The cotton spinners of America have fulfilled the predictions of the fathers of the protective system. They furnish wares unexcelled in quality at prices at which the consumer cannot and does not complain. There are no trusts in the cotton business. This attempt to disturb and injure industries which have grown up under the system of protection is a wanton attack upon labor and upon praiseworthy business enterprises which finds no justification in the condition of the country."

The MANUFACTURERS' RECORD would gladly, had it space at command, reproduce all these papers entire. Every one is terse and to the point. All are by practical men, thoroughly acquainted with the industries of which they have written. Their arguments apply to all sections, but are especially applicable to the industrial condition of the South.

### Steel Making in the South.

Capt. Alfred E. Hunt, the well-known iron man, in a paper on "Wrought Iron Direct from Ore," read at a recent meeting of Mining Engineers at Pittsburgh, in referring to the making of steel, made the following remarks, which are of especial interest to the South:

The Batho furnace is one of the best forms of open hearth furnaces yet devised. It is unlike the old style open hearth furnaces, which are put into one compact building, in which all the apparatus necessary to the operations is built, in that it consists of five separate wrought iron cases lined with fire-brick, which form the outside walls of the four regenerators and of the melting vessel. The regenerators are connected to the melting vessel by means of wrought iron pipes lined with refractory material. The Batho furnace is well adapted for the basic process on account of the facility of getting at and replacing the linings. The round regenerator cases have large doors opening into them extending from top to bottom of the regenerators, and the roofs are removable, rendering them very accessible for cleaning out and repairing. It is claimed that repairs can be made in the Batho furnace very rapidly, records having been made repeatedly of stopping at 10 A. M. Saturday and the furnace gotten ready to charge Sunday evening, a cold 15-ton furnace being heated up ready to charge inside of 24 hours.

The developments in the open-hearth process have made it practicable to-day, in any desirable location, to build a 15-ton open-hearth furnace plant complete, with an iron building 80x120 feet, necessary cranes, hydraulics, and all ready to run, for from \$25,000 to \$28,000, and with an additional of say \$11,000 per furnace, three more furnaces can be built. For about \$60,000 an open-hearth plant capable of producing 180 tons of ingots per day, or an annual capacity of say 45,000 tons, can be built. This plant can be equipped with a universal blooming mill at a cost of \$50,000, and say a 23, 16 and 10-inch mill, with iron building, at a cost of about \$65,000 more, so that for \$175,000 a complete steel plant can be built. A Bessemer works of the same capacity, built in the same good, substantial way, would cost at least \$300,000 more. The fact that the open hearth complete can be built to turn out 45 to 50 tons of ingots per day for an outlay of \$25,000 will be likely, with the advantages

of the basic hearth, allowing a much wider range of stock being used, to induce many small plants to be put up, especially in the Southern States. This will cause a state of affairs that will likely be felt by the comparatively few large concerns who are now nearly the sole producers of steel in this country.

### Southern Pine.

The value of Southern pine can not possibly be overestimated, for where can you find a place where timber for building purposes is better adapted? From the hovel to the palace, there is no place but that it can be used to give strength, stability and ornament. Then to these qualities we must necessarily add another, permanency. It lasts while most other timbers fail and have often to be renewed. Its strength is second only to the oak, and it is fast working its way into the place where oak used to be used exclusively. Many of our finest vessels are now timbered and planked, inside and out, with yellow pine. The size and length of timbers which can be sawed from it make it the most available for timbers for buildings of all kinds.

In the construction of trusses for heavy roofs, there is no timber so well adapted, and the lengths we can get without splitting peculiarly adapt it to this special purpose. In timber for railroad cars there is nothing equal to it. Sills, inside and out, plates, studding, and, in fact, every part of a common freight car, except transoms and sheathing, can be made from it. In studding for passenger cars I see no reason why it might not be used, for many times the ash from which they are made is not half as strong as Southern pine selected especially for that work. Vertical grain Southern pine I consider is much stronger and firmer than most of the studding used in passenger coaches. For frames of houses it has no equal for strength and durability, and every part of the house, from garret to cellar, can be economically made from this wood. Even for finish there are selections from it that equal in beauty any kind of wood that grows. Shingles, but no person in city residences, no matter how small and insignificant, ought ever to use shingles for roof coverings.

Railroads are using it extensively for ties on iron bridges and in the general construction of wooden bridges where iron is not used. I consider it the best and most economical timber for all kinds of work where wood is used. There need not be an ounce of waste in a cargo of it. The small pieces make the best kind of door saddles (thresholds) either inside or out, and wainscoting 1-inch thick is as good generally as 1-inch stock of any other kind of wood.

Much more might be said in praise of this wood, that a large part of the country builders know but comparatively little about.—W. in the Wood-Worker.

MR. A. B. SHEPPERSON, 13 William street, New York, the well-known cotton statistician, has just issued a valuable little pamphlet, entitled "Cotton Movement to March 1st," giving many statistics of value, comparisons with previous years, etc.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers and dealers in machinery and supplies.



## Mississippi Notes.

## Agricultural and Manufacturing Items.

(Special correspondence MANUFACTURERS' RECORD.)

ABERDEEN, MISS., March 31, 1888.

The Board of Deacons of the Presbyterian Church at Meridian are ready to receive bids from contractors for the immediate erection of a parsonage building.

Tupelo, in Lee county, which is now the crossing of the Mobile & Ohio and Kansas City, Memphis & Birmingham Railroads, is building a fine hotel.

Mississippi's crops for 1888 will be as thoroughly diversified as those of any State in the Union, including almost every product known to this continent, and several that have but recently obtained recognition by the horticulturists of North America; but she will not reduce either her corn or her cotton areas, and, on the contrary, will increase them both, chiefly in the wonderfully rich Yazoo delta region.

Several citizens of Virginia and the District of Columbia have recently purchased town lots with sea-beach frontage at Pass Christian, on our south coast. It will not be long before that lovely coast, with its grand beach, charming villa villages, delightful drives under the shade of ancient live-oaks, and background of balsamic pines, will become as great a summer resort for the people of the North and West as it has been for many years for the wealth, fashion and beauty of New Orleans. As a winter resort for invalids it has already gained great popularity with the Northern people, who have filled its excellent hotels during the last two winters, and they will not leave its summer charms much longer to the monopoly of Southern people.

The joint resolution passed by the Mississippi legislature, asking Congress to withdraw the public lands from sale in this State and reserve them for homesteads, has caused the Western and Southern lumbermen to "hustle." They have every reason to believe that the withdrawal will be made, and as the public domain remaining in Mississippi is almost entirely pine forests, the lumbermen are crowding the land office at Jackson as purchasers.

Governor Lowry has issued a proclamation calling a convention of the people to assemble at Jackson on Thursday, May 10th, to take measures looking to the organization of a State Immigration Association. He says among other things: "All that is needed for Mississippi to have her borders thronged with the thrifty and sturdy farmers now seeking homes in the Southern States is to uprise them of advantages of soil and climate, and convince them of the generous welcome they will receive." The governor is right.

At Wesson, in Copiah county, a large body of brick masons are actively employed on the construction of Mill No. 3 of the Mississippi Cotton & Woolen Factory, that is by this great increase in plant endeavoring to catch up with the immense demands for its fabrics that has for several years past kept its chief lines of goods well six months in advance of manufacture. Mill No. 3 will be 200 feet front by 10 feet wide and four stories high, with a loom-shed 175x300 feet, with a basement 17x150 feet, to be used for storing and smelting wool. This mill will be of handsome architectural design and finish, with electric lights, automatic sprinklers, fire escapes and the modern improvements incident to a first-class manufactory. This addition will enable the factory to nearly double its output, and will swell the number of employees up to 1,800. A large number of persons from the neighboring counties are already seeking employment on the new rolls. The consumption of raw material when the new mill is com-

pleted will be, for the entire plant, about 1,500,000 pounds of wool and 3,500,000 pounds of cotton per annum. This increase in plant and force will necessarily largely increase the number of tenement houses for operatives, and add new business houses to this bustling factory town. The Illinois Central Railroad will add 3,300 feet of sidings at Wesson to meet the increased demands of the factory.

The dye-house of the Mississippi Mills, at Wesson, has recently been greatly enlarged and improved.

The people of Greenville are confident of the early construction of a railroad from their town to Yazoo City.

The report G. R. Page, secretary, to Hon. Thos. W. White, president of the Yazoo Delta Levee Board, shows that the board has expended on account of construction and repairs of levees from November 1, 1887, to March 8, 1888, \$64,211.23, and has a balance on hand of \$78,772.81.

The Yazoo City Reading Club organized on March 16, with 31 members, electing Mr. J. A. Barkdale as president. The initiation fee was \$5, and this beginning is regarded as a very favorable one.

Tupelo is about to establish a furniture factory.

The First National Bank of Aberdeen has increased its capital from \$50,000 to \$100,000.

The \$100,000 of stock authorized by the charter of the Aberdeen Building & Loan Association, that was started last month, has almost all been subscribed.

The receipts of cotton at Columbus for this season up to March 23 amounted to 32,550 bales.

West Point has organized a building and loan association with a capital stock of 1,000 shares at \$100 each. The stock will all be promptly taken.

The Vicksburg Post claims that the chime of bells recently hung in St. Paul's Cathedral in that city is one of the only three complete sets in this country.

Meridian proposes to erect a new public school building upon a plan costing \$30,000.

The East Mississippi Cotton Mill's, a modest little establishment in Lauderdale county, within two miles of Meridian, owned and operated by Mr. J. S. Solomon, of that city, has orders for its goods constantly ahead of its capacity, and extensive additions to its plant will be made at an early day.

The Meridian News says: "There is a proposition incubating here to build a large cotton mill in or near the city."

The city of Jackson last week purchased the residence property of Chief Justice J. A. P. Campbell as a site for a new city school building to be commenced at once, and to be equal in all of its appointments and conditions to any in the State.

The merchants of Biloxi, on the South Mississippi coast, (which, by the way, was the town at which De Sota fitted out the expedition that discovered the Mississippi river), are organizing a company to purchase a steamboat to trade between that town and New Orleans, to compete with the railroad.

A colony from Michigan has settled in the neighborhood of Beauregard, in Copiah county, and have entered into the prevailing industry in that vicinity, "truck farming."

There are over six miles of "cold frames" on the truck farms in the vicinity of Crystal Springs in Copiah county.

The receipts of cotton at Natchez for the season up to March 23 amounted to 44,919 bales. The stock on hand at that date was 4,095 bales.

Adams county has been authorized by act of legislature to expend \$12,000 in the erection of a new office for the chancery clerk at Natchez.

Wilkinson county claims to be in better financial condition than in any previous year since the war.

The town of Winona, in Montgomery county, is to vote upon the proposition to subscribe \$65,000 towards the extension of the Georgia Pacific Railroad.

The receipts of cotton at Greenville for the season up to March 23 was 47,194 bales, against 32,433 to same date in 1887. The stock on hand March 23 was 5,558 bales.

The pipe laying for the water works at Greenville has been commenced and will be rapidly completed.

The proposed new hotel at Greenville will be of brick, 150x220 feet in area, and three stories high, and will be built in accordance with all the modern requirements.

Forty families from Battle Creek, Mich., "Seventh Day Adventists," have purchased 1,400 acres of land in Copiah county, and will at once commence farming and gardening. They have arranged for the building of a neat church at Beauregard.

## Activity at Anniston.

(Special correspondence MANUFACTURERS' RECORD.)

ANNISTON, ALA., April 2, 1888.

The Model City has been experiencing something of the precursory throbs of another healthful boom during the past week. Probably I should be more guarded in the use of this word, as anything like a "boom" is deprecated here, because what is commonly called a "boom" brings about a reaction, and Anniston prefers a steady growth to a season of feverish activity to day and a period of relaxation and lethargy to-morrow. It desires its industrial growth to be like the delightful evenness of its climate, with no sudden spells of cold or heat to chill or fever the enthusiasm its inhabitants have for the progress and prosperity of the place. Therefore when I employ the term "boom" in speaking of Anniston, it must not be confounded with the same expression now so frequently used to convey an inflated idea, but is intended rather to indicate a similar condition of activity to that which originally called the word into general use. When the boom (meaning a lot of logs fastened end to end to hold the others in place) was full of logs the river was full of men, the mills ran night and day, business was brisk and the outlook for the locality was cheerful indeed. Anniston has no objection to a healthy alertness like this, and that is the kind of an old-fashioned boom, the rush of whose rumblings are to be heard here now. The hotels of Anniston have been taxed to their utmost during the past several days, and the necessity for another hotel in Anniston has been made prominently conspicuous within the last week.

Mr. R. H. Cobb has gone actively to work to organize a \$50,000 stock company to build a fifty-room hotel in this city. He has had plans drawn and specifications made of a very attractive building, and has practically succeeded in raising all but \$10,000 of the desired amount.

A stream of people with new faces and well-to-do appearance have contributed considerably to the city-like bustle of our thoroughfares the past day or so, and there has been a marked activity in real estate, many lots having been sold to individuals who give every assurance of their intention to erect handsome structures. The building operations this year in the one item of dwellings is something startling. The contractors have over a thousand houses under contract; and large accessions to this number are being made almost every day. I have a report to the effect that the West Anniston Land Co. are to donate 300 lots in West Anniston to a party who guarantees to erect houses on 200 of the lots. I trust this report is well founded, and if it is, the wise, far-see-

ing policy of the West Anniston Land Co. is to be warmly commended. This kind of liberality has built up hundreds of towns in the West.

The planing mills, in order to keep pace with orders, are working night and day, and the six brick-yards around our city are preparing for every demand that may be made upon their capacity this spring and summer.

Quite a number of new enterprises are likely to become established. Of these is a \$25,000 furniture factory, in which Mr. L. Parker Black, of Baltimore, is said to be interested. \$10,000 of this amount is reported to be assured.

Another enterprise which is meeting with very prompt encouragement is that of a 10-ton ice manufactory, and Capt. Peyton B. Bibb, of Montgomery, is here now soliciting subscriptions from our business men to effect the organization of a company having a capital stock of \$25,000. I hear of several other important enterprises, but am not at liberty to speak of them at the present stage of their formation.

Work is progressing steadily on the new city building, and it promises to be a very handsome and convenient structure.

The finishing touches are being given to the public school building, and it is estimated that another similar structure located on the opposite side of town will be found necessary.

The work on the union passenger depot is now progressing vigorously after the recent unsettled weather.

A force of 50 men are at work on the site for Anniston's new \$50,000 coal gas plant. The material has been ordered and is now in transit. A contract with the city calls for the erection of buildings and the laying of five miles of mains by July 9th, and in order to do this a pretty large force of active hustlers will get to work.

## A New West Virginia Gas Coal.

At the recent meeting in Boston of the American Institute of Mining Engineers, Major Jed. Hotchkiss, of Staunton, Va., read a paper on a new gas coal bed recently discovered in Kanawha county, W. Va. Major Hotchkiss, after describing the excellent gas coals of that State already well known, gave some facts regarding his continued search for many years for better gas coal than any heretofore known of. This, he thinks, he has now found. The bed of coal having this rare distinction Major Hotchkiss found on the upper waters of Cabin creek, some 12 miles from the mouth of that stream in the Great Kanawha river valley, near Coalburg station of the Chesapeake & Ohio Railway, where it has a thickness of about six feet. From the appearance of its fracture, resembling that of rosin when broken from a mass, and from its high gas-producing qualities, he named this the pitch gas coal bed.

## COMPARATIVE TESTS.

Samples of pitch gas coal from near the outcrop of the bed were sent to the Cincinnati (Ohio) Gas Works and there tested with the following results, compared with tests made at the same works of the noted gas coal of the Pittsburg bed, the Youghiogheny, the Penn and other celebrated gas coals of Western Pennsylvania, with the following result:

	Candle ft.
Pitch gas coal yields % B. of coal 6.35 ft. x 17	107
Pittsburg gas coal yields % B. of coal 5.05 ft. x 14	73

Making 34 candle feet in favor of pitch gas coal.

The figures per ton of 2,000 pounds are:

	Candle ft.
Pitch gas coal, 107 candle ft. x 2,000 lbs.	21,400
Pittsburg gas coal, 73 candle ft. x 2,000 lbs.	14,600

Pitch gas coal having the advantage of 6,800

The yield of gas per ton of 2,000 pounds was:

	Candle ft.
Pitch gas coal, 6.35 % B. of 17 candle power	107
Pittsburg gas coal, 5.05 % B. of 14 candle power	73

A gain of 3,000 feet of gas with 25 more



candle power per ton, or, putting gas at \$1 per 1,000 feet, this pitch gas would be worth to the gas maker \$2.00 a ton more than a ton of the Penn or of the Youghieny gas coal.

#### GAS COAL REQUIREMENTS.

Further under cover samples of this pitch gas coal were sent to the New York City Gas Works, which reported the pro-

#### Number 3 Saw Mill.

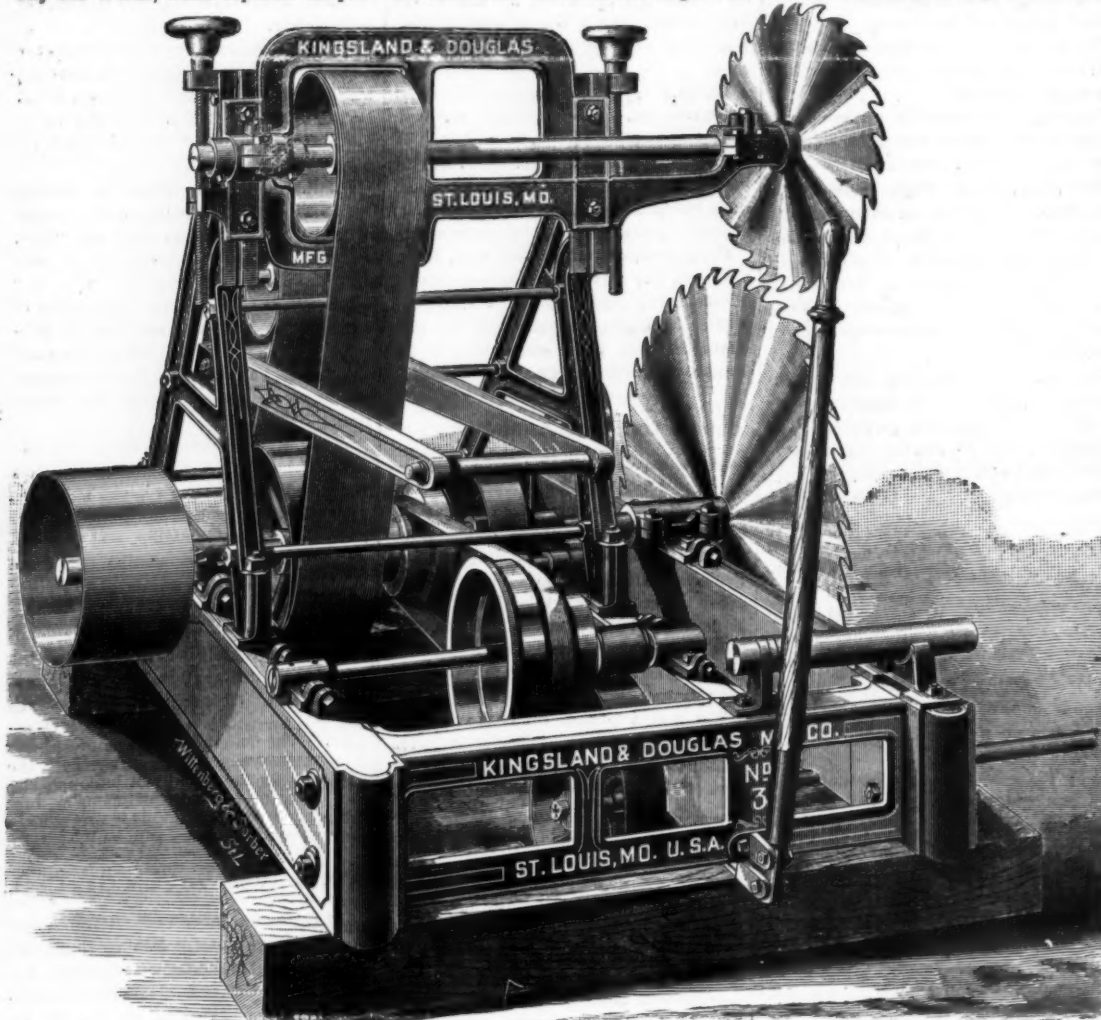
The saw mill herewith illustrated has been manufactured several years and a great many of them are in use. It is received with great favor by those wishing a cheap substantial double or single medium sized mill. It is the smallest double mill and third smallest single mill

The mandrel boxes have a very wide bearing, are adjustable and self-oiling. They being identical the same as the ones furnished with the No. 2 mill and therefore possess the same advantages.

The top frame is made on the same principle as the one furnished with the No. 2 mill, but somewhat differently constructed, as on this size mill the top saw is driven

which the mandrel is affixed, but in addition to same it is held firmly by bolts in the slot on planed front surface of legs. The tightener for top saw belt, as will be seen from cut, is at the command of the sawyer, and he is not necessitated to go back of mill frame to throw same off or on; the top frame is heavy and made entirely of iron.

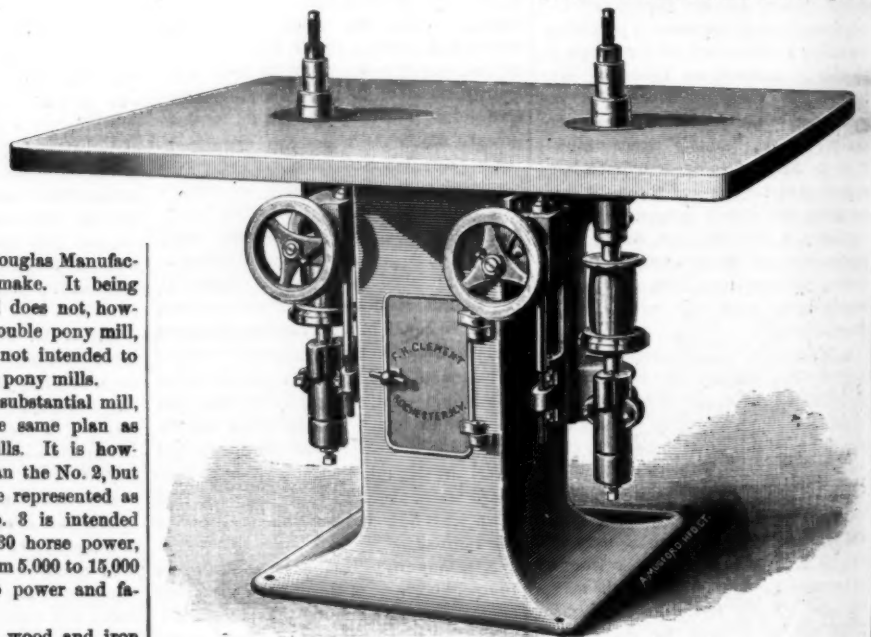
The carriage is made of good sized timbers which are firmly framed together and bolts pass all the way through. The rack segments are 1½ inch pitch, 2½ inch wide and made strong. The carriage rollers are chilled, 6 inches diameter and have wrought pins. When preferred, the manufacturers will furnish the same rollers or flanged ones with axles extending across carriage running in self-oiling boxes. When the flanged rollers are used they furnish improved flat wrought iron track planed perfectly true. This style rollers and track they only furnish when specially ordered and then extra charge is made for same. For further particulars apply to Kingsland & Douglas Manufacturing Co., St. Louis, Mo.



DOUBLE NO. 3 SAW MILL.

#### New Variety Moulder or Shaper.

This illustration shows a new high-class upright moulder or friezer just brought out by Frank H. Clement, No. 215 Mill street, Rochester, N. Y. This is an extra heavy, finely designed and carefully fitted machine, and will suit a critical operator who wants a good, durable, convenient tool that can be depended upon for fine and fast work. Great pains are taken with all the working parts to prevent lost motion, heating of journals and vibration of the spindles. Among the many good points are: the long bearings on the spindles, the upper one being close to the top of the table; self-oiling boxes, covered from dust; large table surface, convenient and sure means of adjusting the spindles vertically, breadth and solidity of attachment of spindle yokes to the frame, large openings in the table around the spindle, into which rings are fitted for various sized collars, and many other similar features which add to the value and capacity of such a tool. The manufacturer states that the spindles



NEW VARIETY MOULDER OR SHAPER.

duction of 14,000 feet of 19 candle power gas per ton of the coal, which may be accepted as representing the value of this coal as a gas producer. This coal is very low in ash, only about three per cent., and also very low in sulphur, consequently it produces a gas-house coke of rare excellence, both the above tests stating that a better gas coke has never been produced at either of the works named.

Major Hotchkiss called attention to the requisites of a good gas coal: it should be (1) high in volatile matter; (2) it should yield a large quantity of gas with high illuminating power; (3) it should be free from impurities, especially low in ash and sulphur; (4) it should produce a good coke, one weighing well, compact, and high in carbon and low in ash. He claimed that this pitch gas coal more nearly conformed to all these requirements than any other coal hitherto tested in this country.

Considering that there are not far from 1,000 gas works in the United States, in which over \$250,000,000 are invested, and which give employment to more than 20,000 men, it is evident that it is a very important matter to have introduced for general use a new gas coal from which such results as those above stated can be obtained. As a rule it may be stated that the richer coal enables the gas-maker to produce cheaper gas, because its use reduces the cost of labor, wear, fuel, etc., while at the same time it produces a better illuminant.

**NOTE** If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

which the Kingsland & Douglas Manufacturing Co., of St. Louis, make. It being their smallest double mill does not, however, signify that it is a double pony mill, as it is far from it and is not intended to compete in price with the pony mills.

This is a well built and substantial mill, and made exactly on the same plan as their No. 2 and larger mills. It is however somewhat lighter than the No. 2, but heavier than some that are represented as standard mills. This No. 3 is intended for an engine from 15 to 30 horse power, and ranges in capacity from 5,000 to 15,000 feet per day, according to power and facilities employed.

The frame is combined wood and iron and very substantially put together; the mandrel is same diameter as the one furnished with the No. 2 mill; the collar is welded on mandrel and not shrunk on.

The friction feed is constructed similar to the No. 2; it has three feeds and feed belt is 2½ inches wide. The frame of mill is wider than any other of similar size, allowing ample room for off-bearing of lumber and slabs. The No. 3, like the No. 2, has wedge roller and bearing roller and the saw guide is a good one,

from the inside of the mill frame, the main driving pulley being placed on outside of frame to give more room between the saw and main belt. This top frame straddles the lower mandrel; is very rigid and firm and has the same advantage as the No. 2. The upper mandrel is raised or lowered by means of hand wheels to suit different sizes saws. These also hold the frame to

can be made entire or with independent top sections, as wanted, and that a suitable counter-shaft with floor stands is furnished with the machine, unless otherwise ordered. The table may be wood or iron, and collars of any diameter up to four or five inches may be run on the spindles. Right collars are usually sent with the machine. Further information may be obtained of the manufacturer, as above.



### Improved Combination Saw and Dado Machine.

This improved combination saw and dado machine is claimed to be the most complete machine ever offered to woodworkers. It is intended for ripping, sawing at any angle to 45 degrees, plowing, grooving, dadoing, etc., and, in fact, is indispensable, the makers say, in the manufacture of door and window frames, mitre

machine are for adjusting the sliding tops apart for using dado head, changing saw, etc.

The latest and most important point to which special attention is called is the friction device for moving the carriage. It is operated by the foot treadle which connects the power to the saw carriage and brings it forward at any rate from 5 to 100 feet per minute at the will of the operator.

### Standard Planing and Matching Machine.

The standard planing and matching machine, shown in the cut, is of new design and has been brought out to meet the requirements of those who want a first-class planing and matching machine, for use on all kinds of work, without incurring the expense of a large machine that would be beyond their wants. It has

The cylinder is steel, seven inches diameter with four wings, two or four as preferred, are slotted for the use of novelty siding, beading and other shaped knives. The shaft is of tool steel, fitted through the entire length of the cylinder, under a pressure of from 80 to 100 tons, and is turned perfectly true and accurately balanced.

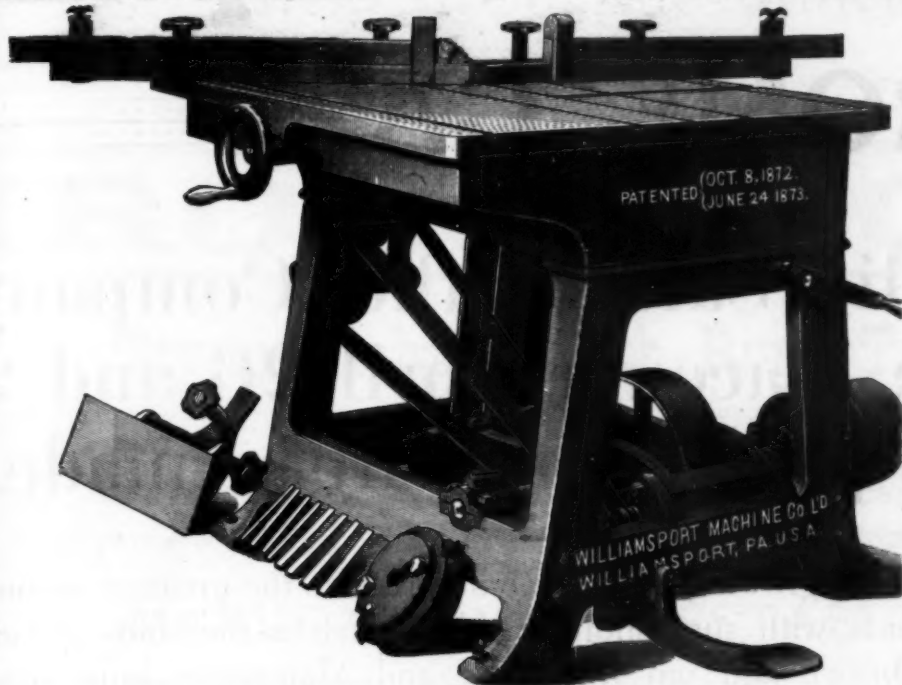
The pressure bar on the rough lumber is arranged to swing or yield concentric with the knives, and has a pivoted shoe or bar that sets close to the knives, receiving pressure by weights and will always maintain its close relation to the knives no matter what the variation in thickness of lumber may be.

The pressure bar on the finished lumber is held in place by slides and screws and is provided with springs, allowing the bar to yield for wet or resinous lumber. Both pressure bars travel up and down with the cylinder and can be set forward or back for either very fine surfacing or the use of moulding knives. This machine can be changed from a surfacer to a matcher and vice versa in one minute. The matcher heads are of improved clamp pattern, 4½ inches diameter, two wings. The movable matcher head is provided with a patent yielding chip breaker, to prevent tearing lumber.

The matcher spindles are of the best tool steel, the lower bearing being fitted with patent adjustable and self-oiling step of steel and gun metal.

While the rolls are fitted with improved expansion gearing and will yield to any inequalities and keep clear of gum. All the rolls are raised and lowered together while running by turning one crank at the feeding end of the machine. The gearing is heavy and of good design, runs quietly and is covered from shavings. The idle gears, studs and feed pinions are steel. The pressure is by weights and levers which fall on stops. All pulleys are turned inside and outside and carefully balanced.

This machine feeds from 35 to 50 feet per minute; tight and loose pulleys twelve



IMPROVED COMBINATION SAW AND DADO MACHINE.

ing heavy mouldings, plowing and grooving door and window jambs, etc.

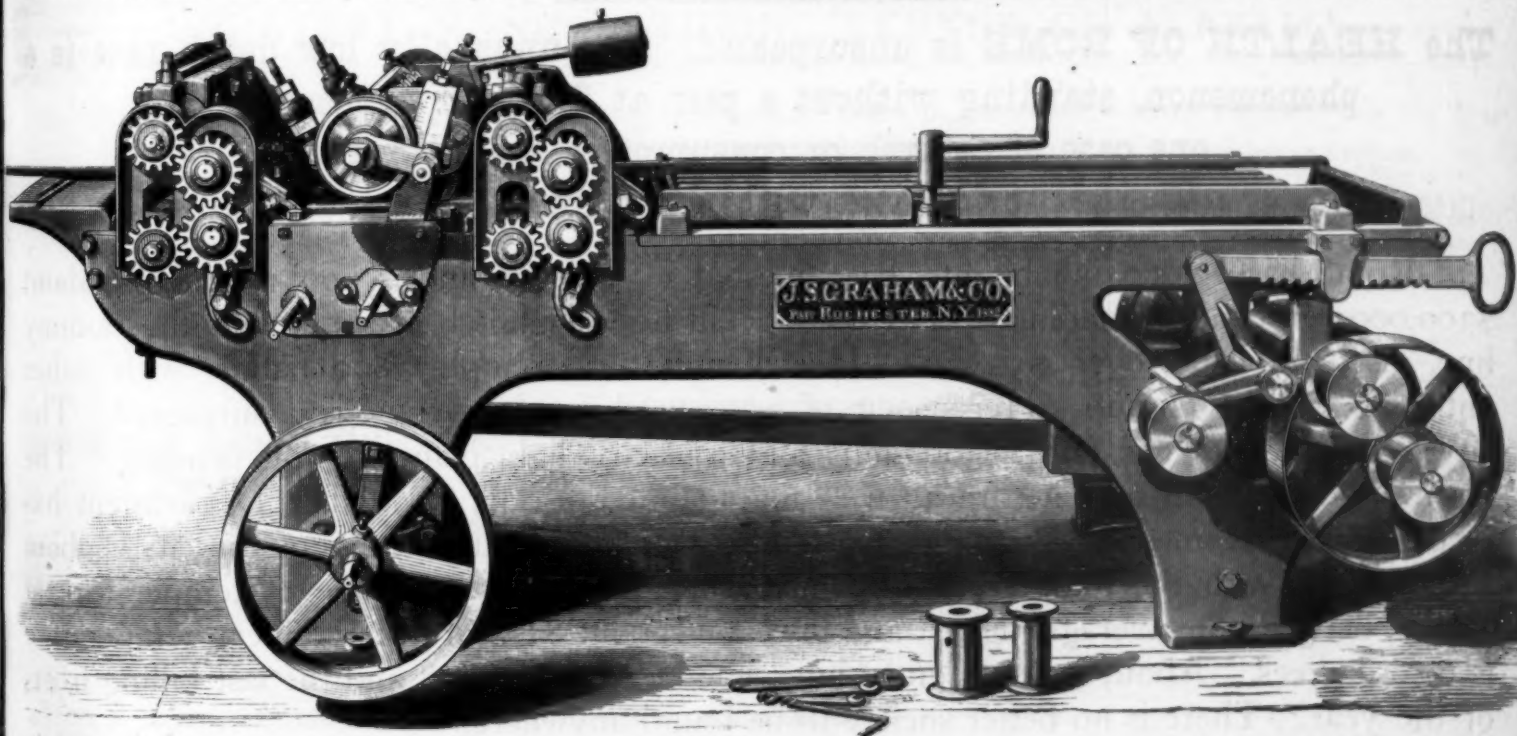
The arbor is made of steel, and runs in babbitted boxes in a strong yoked carriage that is fitted with rollers that travel on ways, which reduces the friction. The ways are fitted to the main frame of the machine and are raised or lowered by

The treadle is placed close to the floor so that the operator stands with heel on the floor and toe on the treadle, and by moving the treadle 1-16 of an inch, connects the power and brings the carriage forward.

By removing the pressure from the treadle the power is disconnected and the

many useful features in its construction, and will be found to be a superior machine for small jobbing mills and factories.

It is built with four feed rolls, five inches diameter and planes one or two sides 24 inches wide, four inches thick, matches 14 inches wide and beads, rabbets or cuts any



STANDARD PLANING AND MATCHING MACHINE.

worm and worm wheel, operated by the crank at front of machine. This adjustment is positive and requires no set bolts to keep it just where it is wanted, as it can only move by turning the crank. When operating the machine, the crank can be slipped off in an instant, if so desired. The hand wheels on sides of the

carriage is returned to its position by the swing tightener, which answers a double purpose—one is that it draws the carriage back to its proper position and the other is that it keeps the driving belt always tight. For any further information address Williamsport Machine Co., Limited, Williamsport, Pa.

kind of fancy siding or ordinary moulding.

The frame is 9 feet long, cast on the "tubular section" plan, having two thicknesses or plates of iron, hollow in the center, tied together by numerous struts at close intervals. The machine weighs 3,200 to 3,500 pounds.

inches diameter six inch face and should run 950 revolutions per minute.


Further particulars can be obtained from the manufacturers, J. S. Graham & Co., Rochester, N. Y.

Subscribe to the MANUFACTURERS' RECORD. Price \$4.00 a year, or six months for \$2.00.

❖ ————— THE ————— ❖

# Rome Land Company

## ROME, CA.

 **A Public Sale of the Company's Lots will take place on April 26 and 27. Easy terms to purchasers will be made.**

**O**F all the growing cities in the growing South, Rome presents the greatest opening for money-making investments, with surrounding fields as rich as the lands of Goshen, with exhaustless deposits of brown and red Iron Ores and Manganese immediately at hand on all sides, with mountains of Marble and Limestone coming right up to the city, with an abundance of the best Coal easy of access, areas of untouched forests, and with seven railroad outlets and two navigable rivers, Rome stands, in natural advantages, pre-eminently above any other proud and pretentious city within the limits of this proud and ambitious commonwealth.

**The HEALTH OF ROME is unsurpassed. The unusually low death rate is a phenomenon, standing without a peer at 8.40 per thousand. Not one case of catarrh or consumption exists or ever originated within her limits.**

Rome has 12,000 inhabitants, has invested in colleges and school buildings about \$300,000; in church building over \$100,000; in her new hotel \$125,000; in the dummy line, just completed, over \$50,000. Her manufactories employ 800 hands, with other enterprises now going up. Her system of water-works and sewerage is unsurpassed. The city is lighted with gas, and negotiations for an electric light plant are now pending. The highways leading to the city are all well macadamized. The Post-office Department has recently made Rome a free postal delivery office. The annual business of the city is about \$12,000,000, with the trade constantly increasing. The yearly range of temperature at Rome, between the average highest and lowest, is about 84 degrees; the mean temperature is 60.6 degrees. About seven months intervene between the first and the last killing frosts of the year. There is no better society to be found anywhere.

The Rome Land Company (J. W. Rounsaville, President, T. F. Howell, Treasurer, and J. L. Bass, Secretary and Business Manager) will donate ample grounds to, and otherwise aid, any worthy manufacturing enterprise that may locate here.

Send for circulars and pamphlets.

**THE ROME LAND CO., ROME, CA.**



# GADSDEN, ALA.

"The Hub of the Mineral Belt."

— ONLY —

## IRON AND COAL

City in Alabama with River Transportation.

### THE GADSDEN LAND AND IMPROVEMENT CO.

Own large tract of Eligibly Located Residence Property in the Most Desirable Part of the City, and have fine location on river and railroad for

#### MANUFACTURING ESTABLISHMENTS,

And are offering great inducements to manufacturers to locate their plants in this FAVORED LOCALITY. No place in the South has such Wonderful Advantages. Situated in the midst of the RICHEST IRON SECTION in the State, at the foot of Lookout Mountain on the banks of a Navigable River (THE BEAUTIFUL COOSA), surrounded by Forests of the Finest Timber on the Continent, with Fine Building and Fire Clay, and the FINEST BUILDING STONE all around us, with

Uninterrupted Health, and the Purest and Best Water, and Finest Drainage of any City in the State,

Gadsden should become the

#### GREATEST MANUFACTURING CENTER OF ALABAMA.

The Alabama Great Southern, Rome & Decatur, Tennessee & Coosa, Anniston & Cincinnati Railroads, with the ever flowing Coosa, navigable the year round, gives us as *FINE TRANSPORTATION FACILITIES* as any other city enjoys.

We now have Railroad Car Works, Furnaces, Foundry and Machine Works, Saw Mills, Sash, Door and Blind Factory, Furniture Factory, Ice Factory, Paint Mills, Grist and Flouring Mills, Cotton Ginnery, Fine System of Water Works, Electric Lights, Telephone Communication over City, and also to neighboring cities, Atlanta and Rome, Ga.

**WE WANT** Rolling Mills, Bridge and Bolt Works, Cotton Factories, Woolen Mills, Furniture Factories, in fact all kinds of Factories, even Coffin Factories, (but we want to ship the Coffins to some of the other booming cities.

Liberal Grants of Land will be made by THE GADSDEN LAND & IMPROVEMENT Co., to any of the above-named industries.

FOR FURTHER PARTICULARS ADDRESS

**M. L. FOSTER, Sec. & Treas.**

## THE GADSDEN LAND & IMPROVEMENT CO.

Post-Office Box 145.

**GADSDEN, ALABAMA.**

# FLORENCE, ALA.

## County Seat of Lauderdale County.

At Head of Navigation on Tennessee River, and at Foot of Muscle Shoals Canal,  
which will be open Jan. 1st, 1888.

**SITUATED** on a gently undulating Plateau, 200 feet above high-water mark, surrounded by three large creeks of pure free-stone water. It has a Court House, Two Colleges, Four Public Schools, Six Churches, beautiful wide streets, graded and graveled, and shaded with forest trees; Hotels, fine store houses, Masonic, Odd Fellows, K. of H. and L. of H. lodges. A population of 2,500—moral, social and hospitable.

— The Scenery on Every Side is Picturesque and Beautiful. —

SO MUCH SO THAT IT IS CALLED BY VISITORS

— FAIR FLORENCE. —

There is no Place on the Continent more Healthful and Salubrious.

## MANUFACTURES.

Within the last six months numerous manufactures have been located here, among the number:

Five Large Blast Furnaces,  
One Rolling Mill,  
Three Planing Mills,

One Saw Mill,  
One Flour Mill,  
One Wooden-Ware Factory.

One Cotton Mill,  
One Cotton Compress and Ice  
Factory.

Two Brick Machines and  
Three Hand-Brick Yards.

There are VAST BEDS OF IRON ORE within a few miles North and  
IMMENSE COAL FIELDS SOUTH

ACCESSIBLE BY RAILROADS NOW BEING RAPIDLY CONSTRUCTED.

By the 1st of January the Nashville & Florence Railroad will be completed, making three lines of railroad, and the river, thus opening up VAST AREAS OF TIMBER, IRON ORE, COAL, Marble, Limestone, Kaolin, Fire-Clay, and almost every kind of mineral and product.

THE LANDS IN THE SURROUNDING COUNTRY ARE FERTILE AND PRODUCTIVE.

*All kinds of Grain, Grasses and Fruits grow to perfection. Springs and Water Courses are numerous, and grazing for Cattle is abundant for eight months of the year.*

Pamphlets and maps furnished on application to

# Florence Land, Mining & Manufacturing Company.



# SHEFFIELD, Colbert County, Ala.

## The Iron Manufacturing Center of the South.

**B**EING at the head of navigation, and on the south bank of the Tennessee river, Sheffield is the natural outlet for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best distributing point over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. Four railroads certain, and several others assured. Principal shops of Memphis & Charleston Railroad will be erected here pursuant to written contract. These will employ between four hundred and five hundred mechanics, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here.

### Five Blast Furnaces Now Under Construction,

Of which one is nearly finished, and the remaining four contracted to completion next spring, have estimated capacity of 700 tons pig iron per day. This is 40 per cent. more than now manufactured at Birmingham, Alabama. Experts do not hesitate to say that iron can be manufactured more cheaply at Sheffield than at Birmingham, and its river transportation facilities will enable Sheffield iron to reach the principal markets at a saving of from

**\$2.00 TO \$2.50 PER TON.**

A first-class daily newspaper is regularly issued. Furniture Factory, Bottling Works, Bakery, Dummy Street Railroad, Electric Lights, Agricultural Implement Works, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, and Iron Pipe Works, 15-ton Ice Machine and five-story hotel, with all modern appliances, will be erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers. Postoffice, Telegraph Office and Express Office already established. Paint Works, Stove Works and Compress now being erected. Other manufacturing establishments under consideration, and will probably be built shortly.

Good Water. Free Public Schools and Churches. Health and Climate Unsurpassed.

*Drainage excellent. Splendid opening for men of push and energy. No "Old Fogy" element here.*

*No better point for profitable investment.*

## \*Sites for Manufacturing Enterprises,\*

### And for Free Public Schools and Churches

Donated by Sheffield Land, Iron & Coal Company.

Population January 1st, 1887, 700; August 21st, 1887, by actual count, 2,583. Increase of population, 300 per cent. in eight months, and only limited by accommodations.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

**LIMESTONE** of excellent quality for fluxing iron in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of brown hematite iron ore within twenty miles, along the lines of two Sheffield railroads. The Sheffield & Birmingham Railroad runs through the heart of the Warrior Coal Fields, which abound in first-class coking, steam, gas and grate coal. Timber is abundant and cheap.

The Memphis & Charleston Railroad and the Sheffield & Birmingham Railroad are now in operation into Sheffield. The Louisville & Nashville Railroad Co. is now extending its Nashville, Florence and Sheffield division, which will be completed to Sheffield before July 1st, 1888. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the best combined river and railroad transportation center in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. More are needed. For further information address

**ALFRED H. MOSES, Vice-Prest. and Manager**

**Sheffield Land, Iron & Coal Co., - Sheffield, Ala.**

# Tuskaloosa, Ala.

\* ALABAMA'S NATURAL PITTSBURGH. \*

A Railroad and River Town of 6,000 Inhabitants, in the Coal, Iron and Timber District.

— DIPLOMAS FOR —

**The Best Furnace Coke and the Best Blacksmith Coal**

WERE AWARDED THIS CITY OVER ALL AND MANY COMPETITORS AT THE GREAT PIEDMONT EXPOSITION.

HEALTHFUL LOCATION. SALUBRIOUS CLIMATE. SCHOOL FACILITIES UNEQUALED BY ANY OTHER TOWN IN THE SOUTH.

"EXAMINE THE MAP."

+ SITUATED ON +

**Queen & Crescent**

— TRUNK LINE, —

IN THE

**Warrior Coal Field**

AND ON THE

**WARRIOR RIVER.**

Only Navigable River touching the

**Alabama Mineral Field.**

Eight Months Navigation. Being Surveyed  
now to be opened all the year round.

All Water Navigation to

❖ **MOBILE** ❖

AND THE

**Entire Gulf and Atlantic Coasts.**

THE

**Tuskaloosa Northern Railroad**

Is now under construction into the

**MINERAL and TIMBER FIELDS.**

— THE —

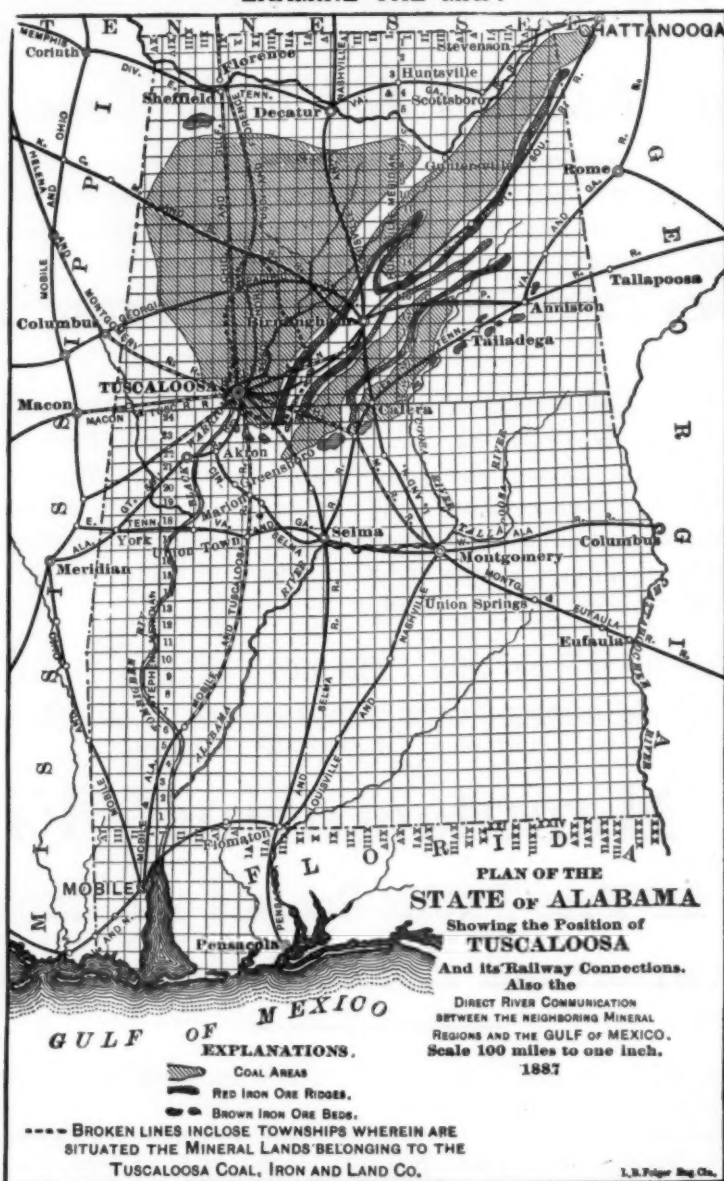
**Macon & Tuskaloosa Railroad**

Will soon be building into the

**COTTON REGION OF MISSISSIPPI.**

**Fine Farming Region**

Around and Below the City.



Superior Inducements

AND

+ ADVANTAGES +

TO ALL

Manufactories Consuming

**WOOD,  
IRON,  
COTTON.**

**FINE COOKING COAL**

In workable veins near city, fully tested.

◀ **The Fire Clay** ▶

Existing in inexhaustible quantities, has been  
practically tested and pronounced

The Best yet Discovered in the South.

**The Tuskaloosa Belt Railway**

NOW IN OPERATION.

✦ **THE TUSKALOOSA WATER WORKS.**

NOW BUILDING.

**COTTON MILL**

In Successful Operation.

ALSO

**LARGE BRICK WORKS**

**COTTON-SEED OIL MILL, &c.**

Manufacturers Seeking Locations in the South have here

❖ **THE GOLDEN OPPORTUNITY.** ❖

Many have availed themselves of it, but such is the wonderful richness of the resources of this section that there is

— ROOM FOR ALL —

THE **Tuskaloosa Coal, Iron & Land Co.,**

Owning 4,600 acres of city and suburban property, and 40,000 acres of mineral and timber lands, offers liberal inducements to manufacturers  
to locate at Tuskaloosa, Nature's City, and invites correspondence and the fullest investigation of its claims.

An illustrated descriptive pamphlet sent free upon application to

**W. C. JEMISON,** President Tuskaloosa Coal, Iron & Land Co., **TUSKALOOSA, ALA.**



# COVERT'S

## ADJUSTABLE

# WEB AND ROPE HALTERS



Both the WEB and ROPE HALTERS can be made a safe, convenient and economical **OPEN BRIDLE** by attaching a Bit to the Halter with our No. 510 Double Snaps. These Double Snaps are made in three sizes, No. 510 being expressly for connecting *Bits to Bridles* and Halters. The Adjustable Rope Halter can be quickly and easily adjusted to fit the smallest colt or the largest horse, and when once adjusted remains firm and immovable until a change is required.

This

## ADJUSTABLE ROPE HALTER

is the only Halter for which perfection can be justly claimed, and, as it has no equal, its heavy, increased demand and sale exceeds that of any other Rope Halter manufactured. The

## ADJUSTABLE WEB HALTERS

are made in three sizes, and will fit all sized horses, from the smallest to the largest, No. 149 being for colts, No. 150 for medium or ordinary sized horses, and No. 151, for the largest horse. The *Crown Piece* and Throat Latch being made of *Web*, both are changed to any desired length by adjusting Buckles, as appears in the cut. It has no leather parts or connections, consequently no stitches to rip or give out and the immense sales of these Halters is the best evidence of their merit and superiority. For full description of goods see our catalogue of 1888.

The Greatest Emporium in the World for the Best **SNAPS, CHAIN, ROPE** and **WEB GOODS**, Etc., Manufactured, is the Celebrated Works of the

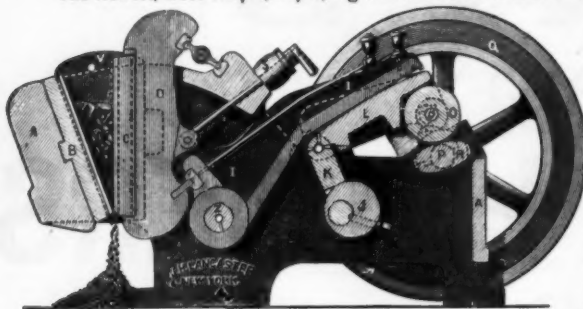
# COVERT MANUFACTURING CO.

West Troy, N. Y.

For Sale by all Dealers Handling this Class of Goods.

## The "LANCASTER" ROCK BREAKER AND ORE CRUSHER,

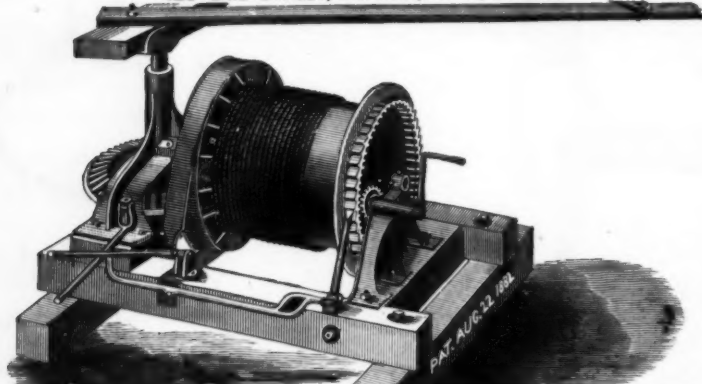
The Newest, Most Simple, Rapid, Lightest and Most Effective Crusher Extant.



TYPEN? LONGITUDINAL SECTION.  
Screens, Elevators and Conveyors. Address

JAS. H. LANCASTER, 187 Broadway, New York,  
Sole Maker of the "Lancaster" Hand and Power Coal Wedging and Coal Drilling Machines.

**THE CONTRACTORS' PLANT MANFG. CO.**  
129 ERIE STREET, BUFFALO, N. Y., U. S. A.



The illustration represents a Horse-Power Hoisting Whim. It is designed for mining purposes on raising coal or water out of a shaft. It will raise a bucket or weight weighing seven hundred pounds seventy-five feet per minute. The machine is made entirely of iron and steel excepting the sills, and is not affected by dry or wet climates. The hoisting drum is under complete control of the man at the shaft, landing the bucket by operating the levers at hand, and by which means the drum can be thrown in and out of gear at will when the horse is in motion, or the bucket lowered by the brakes as safely and conveniently as by a steam power hoist. No clutches to throw out or in gear. The drum will carry 500 feet or more of 5/16 steel wire rope. The machine is **SMALL, LIGHT, EASILY HANDLED AND DURABLE**, sufficiently strong to do the desired work, and so perfectly simple that it can be readily understood by any miner or person inexperienced with machinery. There is a safety attachment on the end of drum in case of an accident, the dog always being in gear when the bucket is being raised. Easily transported; can be made in sections small enough for mule-back transportation if desired.

We Also Manufacture Horse-Power Hoist for Railway Contractors, Bridge Builders and Quarrymen.

Correspondence Solicited. Illustrated Catalogue furnished on application. Mention this paper when you write.

## WALKER MANUFACTURING CO.



Shafting, Hangers,  
PULLEYS.

**PULLEY CASTINGS**  
AND MACHINE-MOULDED  
**GEARING**  
A Specialty.  
Cleveland, Ohio.

Estimates furnished. Write for  
Gear and Price-Lists A.





## Hill Clutch Works,

Cleveland, O.

### HILL Friction Clutch.



## PAGE BELTING COMPANY,



SECTION OF COPPER WIRE-SEWED LIGHT DOUBLE BELTING.

We Manufacture  
the special grades

Also the "Hercules" Lacing  
The Hercules is me-  
lacing; combines  
Raw Hide and of  
Send for Catalogue  
Grades of Belting to use



all the sta-  
of Leather Belting.  
and the Putna Brand Lacing.  
chanically made; is a buffed  
the good qualities of ordinary  
Page's Patent. Try it.  
No. 21, describing the "Kinds and  
for Different Kinds of Work."

CONCORD, N. H., U. S. A.





## West Branch Boiler Works

STEAM BOILERS OF ALL KINDS.  
Stacks, Tanks, Steam Pipe, Pumps, Inspirators, &c.  
All kinds of Valves, Steam and Engine Supplies, &c.  
**E. KEELER COMPANY,**  
WILLIAMSPORT, PA.

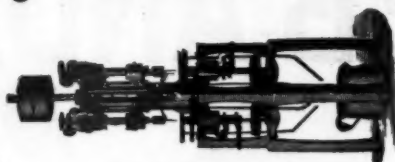
## The Seng Automatic Drill Press.

W. SENG & CO.

11 and 13

S. Canal St.

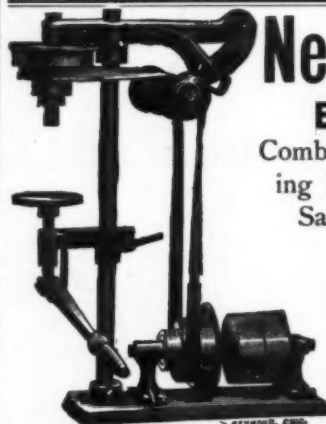
CHICAGO, ILL.



SEND FOR  
CATALOGUE  
AND  
Prices.

## FURNITURE FIXTURES,

Patent Bed Lounge Legs, Bed Lounge Locks, Bed Lounge Extensions, Single and Double  
Crib (fixtures in two styles), Child's Chair Table Latch for Flat, Round and Bent Arm Chair,  
Universal Joint for same.



## New Bench Drills,

### EMERY GRINDING MACHINES,

Combined Sawing and Boring and Shap-  
ing Machine, Foot and Power Band  
Sawing Machines, Foot and Hand  
Power Circular Saws.

## Post & Company,

MANUFACTURERS,

154 Lake Street, - CHICAGO, ILL.

Write for Price Lists and Discounts.

## Wood-Working Machinery.

Circular Saw Mill Machinery, Clapboard and Lath Machinery, Planers, Matchers and  
Molding Machines, Band and Scroll Saws, Sash, Blind and Door machinery a specialty.  
Surfacing Machines, Re-Saws, "Buzz" Planers and Veneer Cutting Machinery, Spoke and  
Axe Handle and Bobbin Machinery, Saws and Belting and General Mill Supplies. Send  
for catalogue and estimates, stating exactly what is required. Largest machinery dealers  
in the United States.

**W. E. DREW, Agent,**  
**S. C. FORSAITH MACHINE CO.,** Machinery and General Dealers, Manchester, N. H.



Solid and Inserted Tooth, Circular, Shingle,  
Mill and other

## SAWS.

ROLLING COULTERS A SPECIALTY.


Write for catalogue and prices.

**CANTON SAW WORKS, - CANTON, OHIO.**



## CINCINNATI SAW & KNIFE WORKS.

**RADCLIFF ROWE & CO**  
40 & 42 PLUM ST.



## Atlanta Saw Works.

MANUFACTURERS OF EVERY VARIETY OF SAWS  
AND DEALERS IN

**SAW MILL SUPPLIES.**

Special attention given to repairing and satisfaction guaranteed.  
Agents for L. Power & Co's Celebrated

## WOOD-WORKING MACHINERY.

Large and Well Selected Stock ready for shipment. Prices  
Low. Liberal Terms. Write for Catalogue.

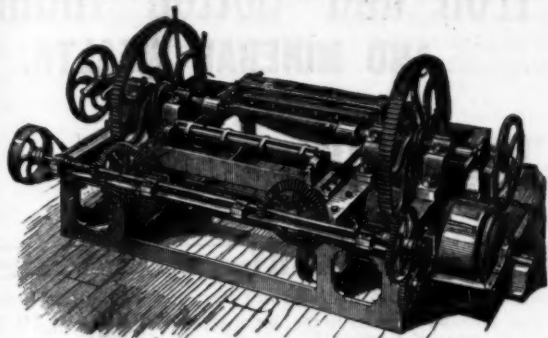
**ATLANTA. - GEORGIA.**

Subscribe to the MANUFACTURERS' RECORD.



# The "Blakeslee" Veneer Machine.

SEND FOR CATALOGUE.

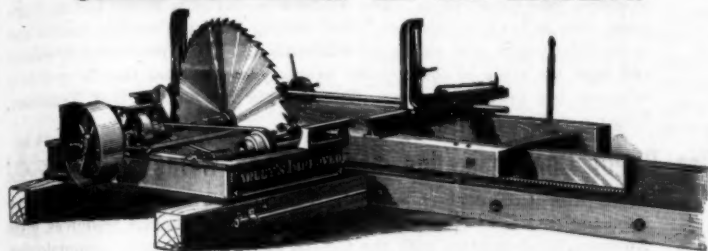


Address,

**DU QUOIN IRON WORKS,**  
DU QUOIN, ILL.

## CIRCULAR SAW MILL.

**CHEAPEST MILL** For the Money  
In the Market.



PORTABLE MILL.

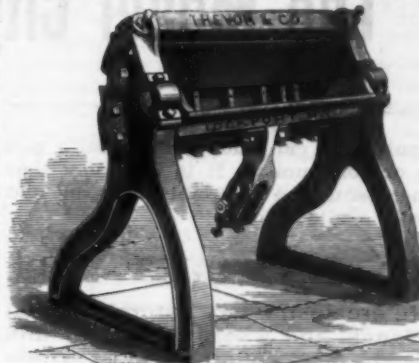
PRICES, \$250 TO \$600.

**A. C. POWELL & SON, Syracuse, N. Y.**

# TREVOR & CO. LOCKPORT, N. Y.

MANUFACTURERS OF

## SHINGLE, HEADING AND Stave Machinery



IMPROVED CROSBY STAVE CUTTER.

Shingle and Heading  
**SAWS.**

Heading Sawing Machines,

**Heading Turners,**

HEADING JOINTERS,

Veneer Cutting Machines,

Stave Equalizers,

Stave Cutters,

Shingle Jointers,

Shingle Sawing Machines,

Drag Saw Machines,

**Handle Machinery.**

Lathes for turning Handles for Brooms, Mops, Forks, Hoes, Axes, Picks, Hammers, Cant Hooks, and for Ball-Bats, Heavy-Stocks, Pike-Poles, Spokes, Etc.

If you want machinery for Staves, Heading, Shingles or Veneer Cutting, send for our catalogue "A." If you want Handle Machinery, send for catalogue "B." Please say where you saw this advertisement.

**TREVOR & CO., Lockport, N. Y.**

## STEARNS MFG. CO., ERIE, PA.

BUILDERS OF

Capacity 15,000 to 60,000 feet per day. **CIRCULAR SAW MILLS** Complete outfits planned and furnished.

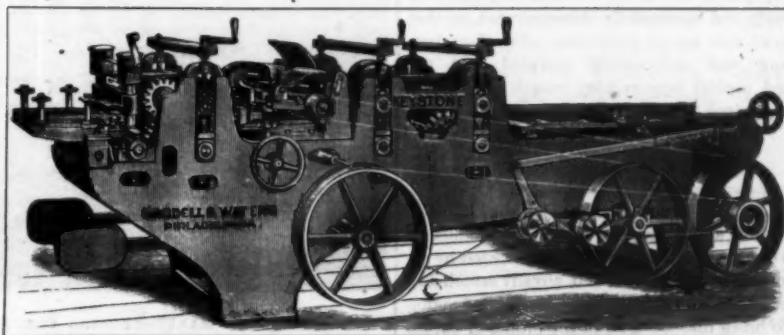
**ENGINES,** 15 to 800 Horse-Power. **BOILERS** OF IRON OR STEEL.

**BAND SAW MILLS,** with Friction or Steam Feed.

**STEARNS' Fractional Head Blocks, Edgers, Cut-Off Saws, Trimmers.** The Wilkin Pony Gang. No foundation. Capacity 20,000 to 60,000 feet of Flooring per day. The Wilkin Heavy Gang Saw Mill for large mills. Tenth and Pinet Mills, Builders, Greenwood, Pa.

# "KEYSTONE"

## Rapid Feed Flooring Machine.



SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.

## GOODELL & WATERS, Manufacturers,

WESTERN WAREROOMS:

11 and 13 S. Canal Street,

CHICAGO, ILL.

MR. C. L. RICE, MANAGER.

3002 Chestnut Street,

PHILADELPHIA.

# Anniston

THE CENTER OF  
Iron and Cotton Industry  
AND MINERAL WEALTH.

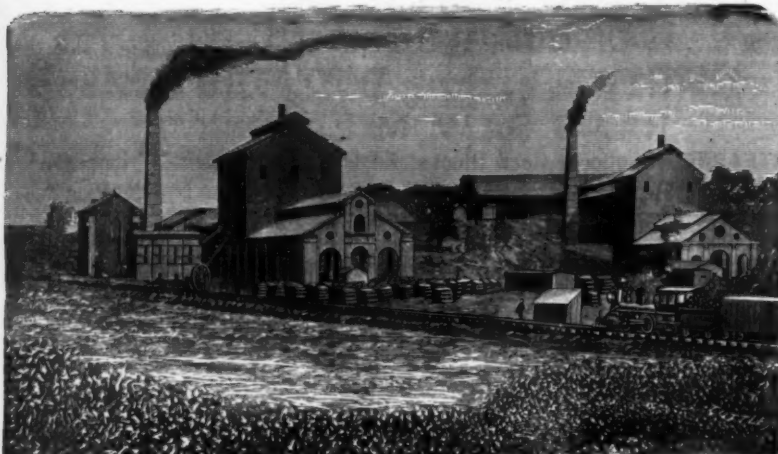
"The Model City of the South."

## IT IS

The Profits of Labor only that can add to the wealth and prosperity of a nation or community. It is this only that can make business successful and profitable, sustain and add to the value of real estate.

## WHERE

Nature's resources are greatest, where nature's capital in rich agricultural lands, and where iron, coal and other useful minerals are most abundant, most accessible and of superior quality for all purposes, there will capital find its safest investment, largest returns and labor reap its richest reward. It is to the Anniston District where the best professional mining engineers and experts of the United States declare the great center of the Iron Industry of the South will drift, where its manufacture will be most permanent and profitable, and where ores in the greatest abundance and accessibility exist, and where they will be most easily mined, that this applies.



WOODSTOCK FURNACES—ANNISTON.

## The Development of the Past Fifteen Years

Confirms all this, and every year convinces the experts of the correctness of their judgment. It is no longer opinion based on scientific and practical education; it is a fact that is clearly and successfully demonstrated, so that the visitor to the Anniston District can see at every step. The four iron furnaces that have been so long and successfully operated, and the new plant now being erected, and rapidly approaching completion, which will be capable of producing one hundred thousand tons of pig iron a year, demonstrate that

## NOWHERE IN THE SOUTH

Has the iron industry been so profitable and so successful, or been established on so permanent a basis, and of no district is this so universally conceded by all, while nowhere else have arrangements been perfected and already established on so complete a scale to work the crude iron into higher branches of manufacture to increase its value, and to bring into the district the profits of skilled labor. **THE GREAT CAR WHEEL WORKS OF NOBLE BROS. & CO.**, their rolling mill and steam forge and machine shops, and the Alabama Car Works, have been absorbed by the

## UNITED STATES ROLLING STOCK COMPANY,

With a capital of \$4,000,000, for the purpose of adding to and enlarging the entire plant to build **TWENTY CARS A DAY**. Everything that goes into the creation of a car, except the tin for the roof and the wire nails, will be created from Anniston's crude material by her labor and skill. Fifty tons of wheel iron will be made into car wheels daily, twenty tons into car axles, fifty tons of pig iron into car and other castings, and fifty tons into bar iron and bolts, making nearly ten thousand dollars per day added to the wealth of the country by profitable labor converting nature's capital to the use of man. This company have a capital of \$4,000,000, and their Anniston works will represent a cash outlay of \$1,000,000. One thousand skilled mechanics will be employed as soon as the great enlargements under way can be completed.

## THE STEEL BLOOMARY

Consumes and increases the value of twenty tons of pig iron per day, while the Pipe Foundry converts to the use of man **TWO HUNDRED TONS OF PIG IRON PER DAY** in one of the largest and best planned and most convenient labor-saving works on this continent. *The Foundry of Murray Stevenson, Engine and Machine Works of Pinder & Co., and Boiler and Sheet Iron Works of J. & D. Noble*, all add to the consumption of crude material by the creation of finished work.

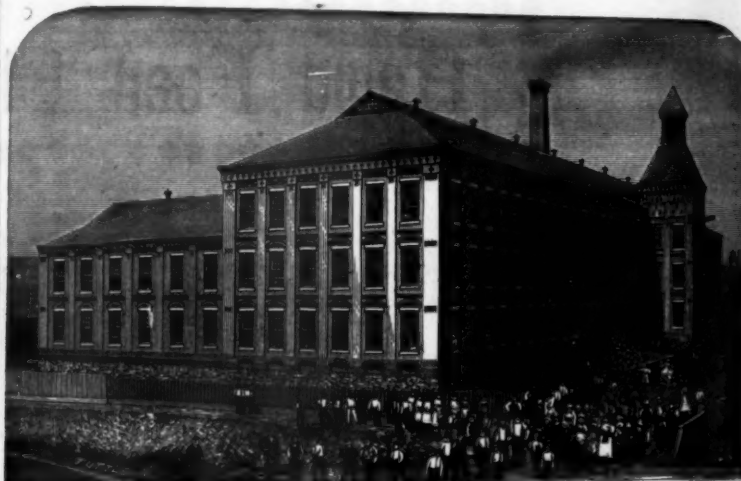
## NOR IS IT TO IRON ALONE

That Anniston relies for increase of wealth and population. The Cotton Factory, with eleven thousand seven hundred spindles and three hundred and seventy-five looms, employing over three hundred and fifty operatives, adds greater value to the products of agriculture by converting six thousand bales of cotton into cotton cloth. The immense ninety-inch Morse Cotton Compress, with its brick warehouses, is fast making Anniston a cotton market and commercial center, and aiding its wholesale and retail merchants to extend and hold the trade of the country tributary to Anniston that its system of railroads has opened to them. The Georgia Pacific, the East Tennessee, Virginia & Georgia Railroad systems,

## Give Direct Communication and Through Rates

To all parts of the country, while the Anniston & Atlantic Railroad, built by Anniston capital to open up new agricultural and mineral resources, gives Anniston, by connection with the Central of Georgia system, communication with the Atlantic sea coast and the new Anniston & Cincinnati Railroad, built and owned by Anniston citizens, opens up new resources and connections, and a shorter line with the great Northwest.

The proposed extension of the Anniston & Atlantic Railroad to Blocton will give another and shorter line to the great Cahaba Mines, producing the very best coal for domestic and manufacturing purposes in the South. Forty thousand acres of these coal lands, upon which a million and a half dollars have been lately spent in opening new mines and building several hundred coke ovens, **ALL OWNED AND CONTROLLED BY ANNISTON CAPITAL**, and developed to mine and manufacture three thousand tons of coal and coke per day, secures to Anniston for generations to come a full and certain supply of cheap fuel for all her industries, operated where a rich agricultural country can feed a manufacturing and commercial people, and where the



ALABAMA MANUFACTURING COMPANY'S COTTON MILL—ANNISTON.

## Best, Healthiest and Most Invigorating Climate in the World,

With mountain air and pure water, and an elevation of nine hundred feet above tide water, insures the health and comfort of the workman and his family; where health and comfort stimulate and lighten labor, and secure to it and its industries the reward due to both. It is these advantages which have been given by nature that enabled Anniston's citizens to create her past and present prosperity, and which secure her future. It is that they may participate in and avail themselves of these advantages that Anniston invites **NEW CAPITAL AND TALENT AND ENERGY** from all sections. We invite all to come and see, and on the spot to judge for themselves of Anniston's great resources and possibilities. The comfort and quiet of the famous Anniston Inn will make a visit to our city a treat and pleasure. Any information, attention and courtesy will be given and shown by addressing or applying to the

**ANNISTON CITY LAND CO., Anniston, Ala.**



# CONSTRUCTION DEPARTMENT

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

## ALABAMA.

**Anniston—Furniture Factory.**—I. Parker Black of Baltimore, Md., and H. G. Tull, of Anniston, are working up a company to start a furniture factory. The capital stock will be about \$25,000.

**Anniston—Ice Factory.**—Peyton B. Bibb, of Montgomery, is organizing a company to build a 10-ton ice factory. The capital stock will be \$25,000.

**Anniston—Houses.**—The Anniston Pipe Works will, it is stated, build a large number of houses.

**Ashville—Dummy Railroad.**—It is reported that arrangements have been made for building the dummy railroad from Ashville to Whitney, three miles, previously reported.

**Birmingham—Ice Cream Factory.**—The Magic City Bakery has started an ice cream factory.

**Birmingham—Building.**—S. M. Russell will erect a \$5,000 brick building.

**Birmingham—Dummy Railroad.**—Efforts will be made to have the North Birmingham Dummy Railroad extended to Jonesville.

**Birmingham—Improvements.**—The East Birmingham Land Co. will hold a meeting on April 23 to consider issuing \$50,000 of bonds for improvement purposes.

**Birmingham—The Georgia Pacific Construction Co.** will hold a meeting on April 25 to consider increasing their capital stock to not more than \$10,000,000.

**Birmingham—The Mechanics' Building & Loan Association,** capital stock \$100,000, has been chartered by J. D. Moore, F. O. Smith and others.

**Birmingham—Rolling Mills.**—The Birmingham Rolling Mills are putting in some new machinery.

**Birmingham—Hotel.**—The Lakeview Hotel Co. will at once add 60 rooms to their hotel.

**Birmingham—Furnace and Edge Tool Factory, &c.**—The Henderson Steel & Manufacturing Co. are, it is reported, making arrangements for building the 100 ton furnaces mentioned last week. They contemplate establishing an edge tool factory to cost about \$50,000, and a cast steel plant.

**Birmingham—Boiler Compound Factory.**—The capacity of the factory for the manufacture of a boiler compound, previously mentioned as to be started by J. C. Winn, will be 100 barrels daily. He expects to have it in operation by August.

**Birmingham—Furnace, Rolling Mill and Foundry.**—It is reported that the Sloss Iron & Steel Co. will build a 100-ton iron furnace at Gate City, and a rolling mill and foundry to consume all iron made.

**Butler—Lands.**—Henry W. Sage, of Chicago, Ill., has recently purchased 40,000 acres of land, probably timber lands.

**Cross Plains—Iron Furnace.**—An iron furnace is reported to be built. If true J. H. Stark can give information.

**Decatur—Wagon and Carriage Factory.**—A Pracht, of Brownsville, Tenn., will probably start a wagon and carriage factory.

**Decatur—Brick Works.**—The Pressed, Stock & Common Brick Co. will shortly put in another brick machine, which they want to purchase.

**Eden—Saw and Lath Mill.**—A saw and lath mill is reported to be built.

**Edwardsville—Mica Mining.**—The name of the \$60,000 stock company, lately mentioned as organized to develop mica mines, is the East Alabama Mica Mining Co. They will begin work at once.

**Epes Station—Saw Mill.**—G. W. Cox and the Meridian Sash and Blind Factory, of Meridian, Miss., have purchased a site to build the saw mill reported last week.

**Evergreen—Saw and Shingle Mill.**—The Michigan Land Co., lately prospecting for a site to build a lumber mill, will build a saw and shingle mill near Evergreen, and a railroad from their mill to the Louisville & Nashville Railroad at Evergreen. The company own about 50,000 acres of pine lands.

**Evergreen—Brick-yard.**—A brick-yard will, it is stated, be started by Y. A. Rabb & Co.

**Florence—Stove Works.**—The Florence Stove Manufacturing Co., previously reported, have organized with Henry Thoele as president; James Connors, vice-president, and H. B. Giffke, secretary and treasurer. They have let contracts for their buildings.

**Fort Payne—Lime Works.**—The Fort Payne Lime Kiln Association has started the lime works reported last week.

**Gadsden—Packing Factory.**—The Garlock Packing Co. have, it is stated, started the manufacture of packing.

**Huntsville—Factory Building.**—Plans have been prepared for the building previously reported as to be erected by the North Alabama Improvement Co., to furnish power for small manufactories. It will be three stories, 50x500 feet.

**Huntsville—Cigar Factory.**—J. Wertheim and G. D. Barron, of Logansport, Ind., will start a cigar factory.

**Irondale—Factory.**—A colony of Germans will, it is stated, locate at Irondale and start one or more manufactories. The Irondale Land & Improvement Co. can give particulars.

**Jacksonville—Tannery.**—It is reported that J. H. Q. Smith has been prospecting for a site for a tannery to be erected by Mr. Wadleigh, of Boston, Mass.

**Jamison—Lumber Mill.**—A lumber mill has lately been built by Langston & Hand.

**Jasper—Saw and Planing Mill.**—J. B. Rosenberger, T. E. Winstead and J. W. Baker, Northern capitalists, have purchased 2,500 acres of pine timber lands near Jasper, and will build a large saw and planing mill, and a logging railroad. Parties wanting to furnish machinery for mill can address W. C. Rosenberger, Winchester, Tenn.

**Jasper—Railroad.**—It is stated that the Sheffield & Birmingham Coal, Iron & Railroad Co. (office, Sheffield) will extend the branch railroad, previously reported as being built to stone quarries near Jasper, to a point on the Blackwater, to open up timber lands.

**Jasper—Rolling Mill.**—It is stated that a company has been formed to build a rolling mill. If true the Jasper Land Co. can probably give information.

**Pell City—Planing Mill.**—A planing mill will be built. Cugus & Collins can probably give information.

**Sheffield—Lumber Mill.**—The Sheffield Manufacturing Co. contemplate adding some machinery to their lumber mill, and erecting a dry kiln.

**Staunton—Brick-yard.**—The brick-yard reported last week has been started by Fully & Gandy.

**Talladega—Mine.**—J. E. Stone and others are organizing a stock company to purchase the Storey mine.

**Talladega—Bridge.**—The Anniston & Atlantic Railroad Co. (office, Anniston) will build a new bridge over Talladega creek, near Talladega.

**Talladega—Iron Furnace and Coke Ovens.**—A report from Talladega states that Geo. W. Chambers has broken ground for one of the iron furnaces previously reported as to be built by English parties. The capacity is reported to be 100 tons. Coke ovens will be built also, it is stated.

**Troy—Variety Works.**—It is reported that variety works will be moved from Georgia to Troy.

**Tuskaloosa—Coal Lands.**—S. P. Canfield, representing Pennsylvania parties, is reported as prospecting in Alabama with a view to purchasing coal lands.

**Tuskaloosa—Opera House.**—Efforts are being made to secure the erection of an opera house.

**Tuskaloosa—Railroad.**—W. C. Jemison, F. N. Hays, W. F. Fitts, G. A. Searcy and others have chartered the Memphis, Tuskaloosa & Atlantic Railroad Co., capital stock \$50,000, to build a road from Columbus, Miss., to Woodstock, Ala. They will soon begin work, it is said.

**Uniontown—Cotton Factory.**—A stock company is reported as being organized to build the cotton factory previously reported as talked of. M. L. Ernst can probably give information if correct.

**Warrior Station—Cotton Factory.**—The building of a cotton factory is being agitated.

**York Station—Stave Factory.**—A stave factory is being erected by parties from Indiana.

## ANNAPOLIS.

**Atkins—Flour Mill.**—There is talk of a flour mill being built.

**Batesville—The Batesville Building & Loan Association** has been chartered. The capital stock is not to exceed \$300,000.

**Bear—Mining.**—C. C. Woods is developing a mine for St. Louis (Mo.) parties.

**Bear—Mining.**—Congo, Bump & Nordin are opening a mine near Bear.

**Bear—Mining.**—The Grey Silver Mining Co., of Franklin, Neb., are preparing to develop their mining properties near Bear.

**Bear—Mining.**—The Richmond Mill & Mining Co. will probably soon begin mining.

**Bear—Mining.**—W. P. Wheeler is opening a mine four miles from Bear.

**Camden—Brick Works.**—The Camden Brick Co. will operate the brick works lately reported as sold by Mr. Sithen. The works will be enlarged.

**Camden—Timber Lands.**—J. B. Friedheim & Co. have sold 160,000 acres of pine timber lands to Chicago parties, previously reported. The purchasers will develop.

**Fort Smith—Railroad.**—A \$40,000 subscription has been raised for the Fort Smith, Paris & Dardanelle Railroad, previously reported, and work is to be commenced within 90 days. The road, which will be about 75 miles long, will be completed in about one year.

**Greenway—Factory.**—W. H. Palmer, of Arlington, Ky., will start a factory.

**Helena—Incline, &c.**—The Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) will spend probably \$125,000 in building the incline and transfer reported last week. They will build in the summer.

**Hot Springs—Saw Mill.**—P. J. Leawidge has lately built a saw mill four miles from Hot Springs.

**Mammoth Spring—Brick-yard.**—A brick yard with a capacity of from 15,000 to 25,000 per day will probably be started, and prices, etc., of machinery are wanted. Address A. M. L. Hawks.

**Mountain View—Hotel.**—G. C. Hinkle has commenced work on a building to be used as a hotel.

**Russellville—Canning Factory.**—The Russellville Canning & Evaporating Co. has been organized with W. J. White as president, to start the factory lately mentioned. The capital stock is \$10,000. They will commence work at once.

## FLORIDA.

**Bagdad—Dry Kiln.**—The Bagdad Sash Factory will erect a dry kiln.

**Bartow—New Town.**—The Plant Investment Co. of Tampa, J. A. Henderson, A. H. Parslow and others have incorporated the Lake Alfred Co., capital stock \$300,000, to build up a town at Bartow junction.

**Bartow—Saw Mill.**—A saw mill will be started by S. C. Cochran.

**Daytona—Railroad.**—W. J. White, of Ormond; Frank W. Sams, New Smyrna; William B. Watson, Jacksonville; and others have chartered the Halifax & Indian River Railway Co., capital stock \$600,000, to build a road from Daytona to the Indian river, about 60 miles.

**DeLand—Courthouse.**—Volusia county has made DeLand the county seat, and a \$20,000 courthouse will be built.

**Gainesville—Furniture Factory.**—Ohio parties talk of starting a furniture factory.

**Jacksonville—Building.**—C. B. Smith has purchased a site, 40x105 feet, to erect a three or four-story brick building.

**Jacksonville—Gas Works.**—The Citizens' Gas & Electric Co., lately reported as putting new boilers in their gas works, are making other additions and improvements.

**Jacksonville—Silk Factory, &c.**—Mr. Contin and others have formed a company with \$50,000 capital stock to cultivate and manufacture silk. They will probably soon begin planting trees for food for the worms.

**Kissimmee—Railroad.**—The Florida Midland Railroad Co. (office, Longwood) will complete their road to Kissimmee by June 1.

**Madison—Water Works.**—W. T. Davis and W. H. Hansman each contemplate building a system of water works.

**Milton—Brick Works.**—Mr. Kehoe has started the manufacture of brick at an old brick yard.

**Monticello—Church.**—The Methodists will build a \$6,000 church.

**Orlando—Building.**—F. A. Curtis will erect a two-story brick building, 46x70 feet.

**Orlando—Sewerage System.**—A committee has been appointed to prepare plans, estimates, etc., for the sewerage system reported last week. The mayor can give information.

**Palatka—Street Railroad.**—The Palatka Street Railroad Co. have reorganized, and will probably soon begin work on their road.

**Pensacola—Railroad.**—The name of the company previously reported as chartered by F. C. Brent and others to build a railroad from Mobile, Ala., to Pensacola, is the Pensacola Short Line Railway Co. The capital stock is \$500,000.

**Silver Springs—Hotel.**—It is rumored that a company is being formed to build a large hotel.

**St. Augustine—Hotel.**—The rumor referred to last week that parties were negotiating for the land of D. Dunham and others with a view to building a hotel is not confirmed.

St. Augustine—Saw Mill.—Mr. Hays, contractor, will establish a saw mill along the Jacksonville & St. Augustine Railroad.

Tallahassee—Hotel.—The Leon Hotel, L. Oglesby, manager, will be enlarged by next season.

Tampa—Hotel.—The Tampa Hotel Co. has been organized to build the fine large hotel previously reported as to be erected by the Plant Investment Co. W. R. Conoley is president.

Tavares—Printing Office.—The Methodists will start a newspaper printing office.

Washington County—Saw Mill, Logging Railroad, &c.—J. E. Austin & Co., of Farwell, Mich., reported last week as purchasing 20,000 acres of timber lands, will erect a large saw and shingle mill about August next. They will also build a logging railroad and large dry kilns.

#### GEORGIA.

Albany—Hotel.—It is reported that Enoch S. Brown, of New York, will build a large hotel to cost not less than \$100,000.

Athens—Cotton Factory.—The Athens Manufacturing Co. are improving their factory.

Athens—Cotton Factory.—It is reported that the Princeton Cotton Factory, previously reported as being improved, will be greatly enlarged in capacity.

Atlanta—Sewing Machine Factory.—I. L. Johnson, of Washington, D. C., is making efforts to organize a stock company to start a sewing machine factory.

Atlanta—Machine Works.—The June Manufacturing Co., of Belvidere, Ill., do not contemplate moving their sewing machine works to Atlanta, as stated last week, but contemplate establishing branch works at some point in the South.

Atlanta—Furniture Factory.—W. L. Fenley, W. L. Ware and others have chartered the Fenley Furniture Co., capital stock \$16,000, to manufacture furniture.

Atlanta—Church.—The building reported last week as to be built for the Payne's Chapel congregation will cost about \$12,000. E. T. Payne can give particulars.

Augusta—Cotton Mill.—The Enterprise Manufacturing Co., previously reported as to put in additional machinery, will receive until April 10 bids for building a one-story weave room, a warehouse and waste house.

Augusta—Warehouse and Wharf.—The council committee on wharves will shortly commence work on the warehouse and wharf previously reported.

Augusta—Cotton Factory.—The John P. King Manufacturing Co. will add 5,920 spindles to their cotton factory, and not 8,000, as stated last week; also 176 looms and other machinery.

Augusta—Hall.—John F. Armstrong, Patrick Walsh and others have chartered the Irish-American Investment Co., capital stock \$25,000. They contemplate building a hall.

Augusta—Railroad.—The Georgia Central Railroad Co. will build a 1½-mile branch to the exposition grounds.

Bainbridge—Timber Lands.—Messrs. Hyde, of Wisconsin, are negotiating for timber lands.

Bainbridge—Saw Mill.—A large saw mill is being erected by Snyder & Dezell.

Brunswick—Ice Factory.—There is talk of an ice factory being built. The mayor can probably give information if anything is done.

Cartersville—Railroad.—Parties are reported as making surveys and securing the right of way for a railroad from Cartersville to Gainesville.

Cedartown—Publishing.—C. W. Smith, T. M. Pace and others have incorporated the Standard Publishing Co., capital stock \$4,000.

Dalton—Water Works.—Proposals for building the water works previously re-

ported are invited until April 16 by John Black.

Darien—Hotel.—There is talk of a large hotel being built.

Dublin—Railroad.—E. C. Machin, N. E. Harris and A. C. Palmer, of Macon, have chartered the Waycross & Dublin Railroad Co. to build a road from Waycross to Dublin, 108 miles. The capital stock is \$10,000.

Emerson—Hotel.—The Emerson Land Co. have commenced work on a hotel.

Emerson—Saw Mill.—The Georgia Graphite Co., previously reported, are building a saw mill.

Hawkinsville—Stave Factory.—D. C. Fitch is erecting machinery on the steamer Mary Jeter to manufacture barrel staves and headings.

Jasper—Mining, &c.—S. A. Darnell, B. M. Hall, D. W. Padgett and others have incorporated the North Georgia Real Estate & Mining Co., capital stock \$5,000, to develop mines, etc.

Jefferson—Cotton Factory.—Elbert Askew is making efforts to organize a company to build a cotton factory.

La Grange—Cotton Factory.—The La Grange Oil & Manufacturing Co., reported last week as to increase capital stock to build a cotton factory, will increase their stock from \$40,000 to \$150,000, the additional capital to be invested in the cotton factory.

Lexington—Stone Quarries.—It is probable that a company will be formed to extensively develop granite quarries. Col. Sims can probably give information if anything is done.

Macon—Railroad.—McDonald, Shea & Co., of Knoxville, Tenn., have received the contract to fill in the trestles along the East Tennessee, Virginia & Georgia Railroad from Macon to Rome. They are advertising to sublet the work.

Macon—Church.—St. Joseph Catholic Church contemplate erecting a new edifice to cost about \$75,000.

Marietta—Hotel.—The building of a \$100,000 hotel is being agitated.

Marietta—Paper Mill.—The Marietta Paper Manufacturing Co. have added some new machinery.

Orchard Hill—Cotton Mill.—The report referred to last week that a company has been formed to build a cotton mill is a canard.

Rabun County—Corundum Mine.—Col. Crittenden has commenced opening the Hix corundum mine.

Sandersville—Planing Mill.—It is reported that Hendrix & Willingham will double the capacity of their planing mill.

Sandersville—Clay Works.—L. M. Hollingsworth will, it is stated, start works at Sandersville or Macon to manufacture articles from clay.

Savannah—Building.—John D. Gould has been awarded the contract to erect a three-story brick building for S. C. Parsons to cost \$11,000.

Tallapoosa—Sanatorium.—It is stated that work will soon be commenced on the sanatorium, previously reported. Dr. Selkirk, Aurora, Ill., is interested.

Thomaston—Church.—The Methodists contemplate building a new church.

#### KENTUCKY.

Beattyville—Lumber Boom.—W. J. Horsley contemplates building a lumber boom in the Kentucky river.

Brandenburg—Gas Wells.—The West Point Natural Gas Co. will sink several more wells.

Carrollton—Flour Mill.—A. W. Darling, previously reported as to build a 50-barrel flour mill, has contracted for roller machinery.

Catlettsburg—Electric Light Plant.—An electric light plant will probably be erected soon, and prices, catalogues, etc., of electric light machinery and automatic steam engines are wanted by H. Wellman.

Covington—Machine Shops.—The Kentucky Central Railroad Co. have purchased 41 acres of land near Covington with a view, it is said, of building large machine shops.

Elkton—School.—The contract to erect the school, previously reported, has been let to John Orr, of Hopkinsville, at \$9,500.

Frankfort—Bills have been introduced in the legislature to incorporate the Bell County Coal & Mining Co.; the Winchester Lighting Co.; the Breathitt County Coal Mining & Manufacturing Co.; the Clifton & Crescent Hill Land & Building Co.; the Burlington & Union Turnpike Road Co.; the Cincinnati, Jellico & Cumberland Gap Railroad Co.; the Buffalo & Hodgenville Railroad Co., and the Hartford Branch Railroad Co.

Georgetown—Silver Mine.—A silver mine is being opened near Georgetown. James Lewis can probably give particulars.

Kentucky—Mineral Lands.—Jere Baxter, of Nashville, Tenn., has lately sold 100,000 acres of coal and iron lands.

Louisville—Church.—St. Peter's German Evangelical Church, Rev. Waldman, pastor, will build a new edifice on Broadway to cost \$35,000. Work will be commenced this spring.

Louisville—Hall.—The Turners' Society contemplate building a hall to cost about \$15,000.

Louisville—Medicine Factory.—E. D. Garr and Alfred Hoffeld have incorporated the Falls City Bitters & Extract Manufacturing Co., capital stock \$2,000, to manufacture medicines, extracts, etc.

Mayfield—Courthouse.—The contract to build the courthouse, previously reported, has been let to M. T. Lewman & Son, of Prather, Ind., at \$31,397.

Winchester—College.—The contract for the wood-work of the Kentucky Wesleyan College, previously reported, has been let to Eason & Wiggins, of Richmond, at \$8,450, and the contract for the brick-work to Thos. Brawner, of Richmond, at \$13,500.

#### LOUISIANA.

Baton Rouge—Publishing.—The Baton Rouge Publishing Co. has been incorporated. T. S. Jones is probably interested.

Eagerly—New Town.—M. B. Hillyard, of New Orleans, and others are starting a new town six miles from Eagerly, to be called Vinton.

Gretna—Stand-pipe.—Thomas & Gorman, of Houston, Texas, have contracted to build a stand-pipe, 14x100 feet, for the Union Oil Co.

Hammond—Sash, Door and Blind Factory.—A sash, door and blind factory will be built by Palmer & Gallup.

Lafayette—Sash, Door and Blind Factory.—A stock company is being organized to start a sash, blind and door factory to cost \$15,000.

New Orleans—Bank Building.—The Whitney National Bank will erect a large building on Gravier street, and are having plans prepared. Work will be commenced about June 1.

#### MARYLAND.

Ashland—Iron Furnace.—The Pennsylvania Steel Co., of Steelton, Pa., will repair the Ashland Furnace and put it in operation.

Baltimore—Building.—Madison Avenue M. E. Church will erect a building in rear of church to cost about \$10,000.

Baltimore—Synagogue.—The Moses Montefiore congregation have secured a site corner Pulaski and Eagle streets to build a synagogue. Louis Feder can give information.

Baltimore—Charcoal Iron Furnace.—R. C. Hoffman has purchased the Laurel Furnace property at Locust Point for \$30,000.

Baltimore—Cable Railroad.—D. D. Mallory, William A. Hanway, John G. Gillman, J. Alexander Preston and others have asked for permit to build a cable railroad.

Baltimore—Street Railroad.—The East Baltimore Passenger Railway Co. have received permit to build their railroad previously reported.

Baltimore—Stove Works.—B. C. Bibb & Co., who operate stove works at Port Deposit, have incorporated as the B. C. Bibb Stove Co., with a capital stock of \$150,000.

Baltimore—Furniture Factory.—Charles Hollander & Son will rebuild their furniture factory, reported in this issue as burned.

Baltimore—Building.—Fred. Brnheimer will erect a three-story brick building, 31 feet front, on Lexington street near Entw. George Bunnecke has the contract.

Baltimore—Building.—The Baltimore Brewing Co. will erect a three-story brick building on Pratt street.

Baltimore—Candy Factory.—Tranzy, Darby & Co. have lately started a candy factory at 117 North Howard street.

Baltimore.—Proposals for the labor and materials required in the approaches to the new postoffice building at Baltimore, including grading, paving and stone and iron work, will be received until April 26 by Will A. Frerer, Washington, D. C.

Baltimore—The Nanticoke Steamboat Co., capital stock \$10,000 has been chartered by F. Howard Dail, Lambert W. Jackson and others.

Baltimore—Pottery.—Matthew J. Brown, Thomas McNulty, William J. Brown, William A. Brown and others have chartered the Maryland Pottery Co., capital stock \$75,000, to carry on the pottery business of Hamill, Brown & Co.

Baltimore—Mining.—The Standard Mutual Mining Co. will purchase new mining machinery.

Baltimore—Gymnasium.—Ground has been broken for the gymnasium previously mentioned as to be built at the Women's College on St. Paul street at a cost of \$30,000. B. F. Bennett can give particulars.

Belair—Flour Mill.—John Moores will remodel his flour mill near Belair to the roller system, and has let the contract to Joseph B. Treadwell.

Frederick—Electric Light Plant.—E. Mullen, representing the Thompson-Houston Electric Co., of Boston, Mass., will make efforts to organize a stock company to erect a plant.

Towson—Christian Hermann and others have chartered the People's Building & Loan Association, capital stock \$100,000.

Washington, D. C.—Building.—The Washington Architectural Iron Works will erect a machine shop and office building corner Market and Water streets to cost \$100,000.

Washington, D. C.—Hospital.—William A. Hammond, of New York, has purchased a site to erect a two-story brick hospital to cost about \$60,000. Plans are being prepared by A. B. Mullett.

Washington, D. C.—Bills have been introduced in the Senate to incorporate the Eckington & Soldiers' Home Railway Co. and the Washington & Western Railroad.

Washington, D. C.—Street Improvements.—The District Commissioners will spend during the year several hundred thousand dollars for street improvements.

Washington, D. C.—Electric Plant.—A bill has been introduced in Congress to charter the Potomac Electric Light & Power Co., with Austin Herr, J. W. Thompson, A. T. Britton and others as corporators.

Washington, D. C.—Buildings.—Patrick Wade will erect 8 brick dwellings on L street, northwest, to cost \$22,000; Henry Orth, 2 dwellings on Eighth street to cost



\$10,000; Robert O'Neill, a \$5,000 brick dwelling on F street, southwest; A. B. Brown, a \$15,000 brick dwelling at 528 P street, northwest, and D. B. Graff, 10 brick dwellings on D street, northeast, to cost \$15,000.

Washington, D. C.—Gas Works.—The Washington Gas Light Co., previously reported as to enlarge their works, have nearly completed the new buildings and have commenced work on the reservoir pit.

#### MISSISSIPPI.

Cornith—Canning Factory.—A stock company has been organized, with Charles Bancroft as secretary, to start a canning factory. Machinery is wanted.

Greenville—Canning Factory.—J. C. Magee contemplates starting a canning factory, and wants information as to cost of machinery.

Greenville—Hotel.—Plans have been prepared for the 100-room hotel lately mentioned as to be built by the Greenville Hotel Co. It will be of brick, three stories, 150x130 feet. The cost will be probably \$60,000.

Greenville—Railroad.—\$25,000 will probably be granted to purchase terminal facilities and river frontage for the Georgia Pacific Railroad Co. (office, Birmingham, Ala.), previously reported as to extend their road to Greenville.

Jackson—School.—A site has been purchased for the school lately reported as to be built, and plans are being prepared. The cost will be about \$30,000. The mayor can give information.

Macon—Canning Factory.—Robert C. Patty contemplates starting a canning factory, and wants to purchase machinery.

Meridian—J. S. Solomon and others have incorporated the Lauderdale White Sulphur Springs Co., capital stock \$10,000.

Meridian—Market-house.—The city will decide by a popular vote on April 9 whether or not to issue the \$15,000 of bonds to build a market house, previously reported.

Myrtle—Saw Mill.—L. H. Elliott & Co. contemplate erecting a saw mill.

Tupelo—Furniture Factory.—A stock company is being organized to start on a small scale the furniture factory reported last week. W. A. McCaulers can probably give information.

Vicksburg—Cotton Factory.—If \$75,000 are raised in Vicksburg, Eastern parties will furnish the rest of the capital to build the cotton factory previously reported.

Wesson—Cotton and Woolen Mills.—The Mississippi Mills, previously reported as to greatly enlarge their cotton and woolen mills, are at work on a new four-story building, 50x200 feet. They will put in electric light machinery, automatic sprinklers, etc.

#### NORTH CAROLINA.

Asheville—Canning Factory.—The name of the company reported last week as formed to start a canning factory is the Asheville Fruit Canning Co. The capital stock is \$15,000. R. P. Walker is president.

Asheville—Depot.—The contract to build the depot for the Richmond & Danville Railroad Co., previously reported, has been let to Elliott & Elliott, of Salisbury.

Asheville—Sash, Door and Blind Factory.—Hart & Williamson will add to their planing mill machinery for manufacturing sash, door and blinds. They want to purchase the machinery.

Barlington—Cotton Factory.—W. L. & E. C. Holt will double the spinning capacity of their Elmira Cotton Mills. Machinery is reported as ordered.

Charlotte—Cotton Mill.—Proposals for the woodwork, carpenter work and roofing of the Alpha Cotton Mills, previously reported, will be received until April 9 by T. L. Seigle.

Charlotte—Cotton Mill.—The additions to the Charlotte Cotton Mills, reported last

week, will consist of a main annex, 27½x190 feet, and a warehouse and lapper room (with new outfit), 50x130 feet. J. D. Brown has the contract for the brick-work.

Charlotte—Hospital.—Plans are being prepared for a building to be erected for St. Peter's Hospital.

Davidson County—Saw Mill.—A saw mill is being built by J. S. Pfaff and C. A. Clodfelter.

Davidson College—Cotton Mill.—The Cornelius Cotton Mills (Co) has been chartered to build a cotton mill.

Greensboro—Foundry and Machine Shop.—Adam Stewart and John Donnell, Jr., will establish a foundry and machine shop.

Halifax—Grist Mill and Gin.—A grist mill and gin have lately been established by T. L. Emry.

Hamilton—Saw Mill.—The saw mill of Frank Hitch has been enlarged.

Henderson—Tobacco Factory.—Hicks, Briscoe & Co will start the smoking tobacco factory reported last week. They will commence operations soon.

Henderson—Electric Light Plant.—The Henderson Electric Light & Gas Co., previously reported, have purchased a site for their plant.

Henderson—Sash, Door and Blind Factory.—The Henderson Building & Manufacturing Co., previously reported, have ordered machinery for their sash, door and blind factory.

Henderson—Buildings.—K. W. Coghill has contracted to erect 6 two-story brick buildings for W. M. & C. Watkins.

Hickory—Planing and Flouring Mill.—A. W. Whitener & Son will rebuild their planing and flouring mill reported in this issue as burned.

Jackson—Lumber Mill.—The Gumberry & Jackson Railroad & Lumber Co. will move their lumber mill to a point near Jackson.

Jamestown—Canning factory.—Harper Johnson contemplates starting a canning factory.

Laurinburg—Railroad.—The Carolina Central Railroad Co. (office, Wilmington) will relay several miles of track with new steel rails.

Marion—Machine Shops.—Gen. Rosser states that the Charleston, Cincinnati & Chicago Railroad Co. (office, Rock Hill, S. C.) will probably build machine shops.

Morganton—Mining.—J. C. Mills contemplates mining for gold in Silver creek and along its banks.

Murfreesboro—Machine Shop.—E. C. Worrell has purchased machinery to start a machine shop.

Murfreesboro—Planing Mill.—E. A. Buell has added planing machinery to his saw mills.

Old Fort—Cotton Factory.—A cotton factory is reported to be built by Morganton parties.

Raleigh—Sewerage System.—The time for receiving proposals for building the sewerage system previously reported has been extended to April 16. The maximum extent is 20 miles. Address C. G. Latta.

Salisbury—Turpentine Distillery.—A. E. Rankin will start a turpentine distillery.

Salisbury—Cotton Mill.—The Salisbury Cotton Mills have extended the time for receiving bids for building their cotton mill previously reported. The main building will be 98½x188 feet long, the boiler room 31x32 feet, the engine room 61x71 and the dry-house 30x65 feet. They will make a finer quality of goods than at first intended.

Shelby—Hoop Factory.—Perry Dover has started the manufacture of barrel hoops.

Shelby—Cotton Mill.—R. B. Miller, previously reported as to build a cotton mill of from 2,000 to 3,000 spindles capacity, is purchasing machinery. It will be operated by water power,

Shelby—Churn Factory.—J. H. Hightower will start the manufacture of churns.

Shelby—Cotton Mill.—There is talk of a cotton mill being erected at Blanton's mill on Brusby creek.

Shelby—Furniture Factory.—A furniture factory will be started by H. G. Hall.

Tarboro—Factories.—Several manufacturing enterprises are reported to be established soon.

Wadesboro—Canning Factory.—It is reported that J. C. Marshall and others are arranging to start a canning factory.

Winston—Hotel.—The Piedmont Springs Co., capital stock \$15,000, will be organized to build a hotel, &c.

#### SOUTH CAROLINA.

Anderson—Hall.—Hiram Lodge will build a hall.

Anderson—Planing Mill.—Barton & Townsend have, it is stated, lately enlarged their planing mill.

Donnaldsville—Flour Mill.—J. E. Todd has contracted for machinery to erect a flour mill.

Camden—Railroad.—It is stated that the extension of the Palmetto Railroad to Camden is contemplated.

Charleston—Planing Mill.—Howe & Brown contemplate adding a resawing machine to their planing mill.

Clinton—Wood-working Factory.—M. D. Bailey & Sons have started a wood-working factory.

Columbia.—R. M. Anderson and others have chartered the Columbia Real Estate Co., capital stock \$25,000. They will deal in lands, build houses, &c.

Columbia—Reservoir.—Proposals for building the reservoir, previously mentioned, will be received until April 9 by William J. Cathcart.

Graham—Grist Mill and Gin.—D. S. Harzog expects to rebuild his grist mill and gin, lately mentioned as burned.

Greenville—Gold Mine.—E. H. Mason is negotiating with parties to have a gold mine in Greenville county developed.

Pickens—Asbestos Mines.—Mr. Sheridan, of Boston, Mass., representing the Boston Asbestos Co., has been inspecting asbestos mines with a view to purchasing.

South Carolina—Chlorination Works.—Chlorination works are reported to be built at the Haile gold mine.

Spartanburg—Cotton Factory.—John B. Cleveland, George Cofield and others have chartered the Spartanburg Manufacturing Co. to build the cotton factory reported last week. The capital stock will be \$100,000 or more.

Winnsboro—Gin Factory.—A company has been organized to extensively manufacture the Elliott cotton gin heretofore manufactured by J. M. Elliott.

#### TENNESSEE.

Alexandria—Church.—The Baptists will shortly build a church.

Ahens—Shingle and Lath Mill.—Ivins Bros., lately mentioned as starting brick works, will probably add a shingle and lath mill.

Athens—Marble Quarry.—Michigan parties expect to develop the marble on the land of William Lasater.

Athens—Cotton Mill.—The Mt. Verd Mills Co. are adding some spinning machinery to their cotton mill.

Bluff City—Cotton Factory.—Patterson & Fry are, it is reported, adding about 2,000 spindles and other machinery to their cotton factory.

Bolivar—Railroad.—The Louisville, New Orleans and Texas Railroad Co. (office, Memphis) contemplate building a railroad from at or near Huntingdon via Bolivar to a point in Coahoma county, Miss., about 50 or more miles.

Bristol—Electric Light Plant.—The Bristol-Goodson Electric Light & Power Co. have ordered an additional dynamo for their plant.

Bristol—Railroad.—The East Tennessee, Virginia & Georgia Railroad Co. will, it is stated, relay their main line from Bristol to Chattanooga with 70 lb. steel rails.

Brownsville—Canning Factory.—The Brownsville Canning & Manufacturing Co., reported last week as starting a canning factory, will probably start other factories.

Carthage—Planing Mill and Hub and Spoke Factory.—A planing mill and a hub and spoke factory are projected. The Home Enterprise Association can give particulars when anything definite is done.

Charleston—Marble Quarry.—A stock company has, it is reported, been formed to develop a marble quarry near Charleston.

Chattanooga—Powder Factory.—The Emmensite Powder Co., previously reported as chartered, will build works to manufacture the new explosive—emmensite.

Chattanooga—Buildings.—Xen Wheeler has awarded the contract for erecting 5 three-story brick buildings to D. J. Chandler at \$21,000.

Chattanooga—Plow Factory.—It is reported that T. W. Boyle, of Augusta, Ga., contemplates starting a plow factory.

Chattanooga—Asphalt Plant.—The Warren-Scharf Asphalt Paving Co. will erect at once the asphalt plant previously reported. The cost will be about \$12,000.

Chattanooga—Street Railroad.—J. Warner, of the Chattanooga Street Car Co., is, it is reported, investigating the different systems of running cars by electricity.

Chattanooga—Pulley Factory.—The Chattanooga Wood Split Pulley Co. are now building their factory to manufacture pulleys, previously reported. Their capital stock will be \$150,000.

Clarksville—Warehouse.—Hancock, Fraser & Ragdale have purchased a site to build a large tobacco warehouse.

Cleveland—Telephone Line.—John T. Rogers and others have formed a company to build a telephone line.

Cleveland—Saw, Planing and Shingle Mill.—It is reported that a saw, planing and shingle mill will be established by Northern parties.

Columbia—Railroad.—The Nashville, Chattanooga & St. Louis Railroad Co. (office, Nashville) will issue bonds, the proceeds to be used in changing the gauge of the Duck River Valley Railroad from narrow to standard, previously reported.

Covington—Grain Elevator.—The Covington Flour Mill Co. will build a grain elevator.

Dayton—Chalk and Crayon Factory.—A chalk and crayon factory will be started.

Dresden—Flour Mill.—Irvine & Scott will refit their flour mill with roller machinery at a cost of \$6,000.

Dunlap—Flour and Corn Mill.—A. L. Mansfield contemplates improving his flour and corn mill during the year, and wants catalogues, &c., of buhr and roller machinery.

Dyersburg—Church.—The Baptists will build a church, to cost about \$6,000.

Elizabethton—Saw Mill.—A small saw mill has been erected by William Schell, Jr.

Huntingdon—Saw Mill.—J. F. Leach will start a saw mill.

Huntingdon—Woolen Mill.—The Huntingdon Woolen Mill Co., previously reported as to build a woolen mill, have purchased a site, and will soon commence work on a building.

Jackson—Sewerage System.—A sewerage system is being agitated.

**Knoxville—Roundhouse.**—A roundhouse is to be built by the Knoxville & Augusta Railroad Co.

**Knoxville—City Hall.**—The Board of Public Works are having plans prepared for the city hall, reported last week as to be built. The cost will be about \$30,000.

**Maryville—Furniture Factory.**—Machinery has lately been added to the furniture factory of Boyd & Huffstetler.

**McKenzie—Canning Factory.**—It is proposed to form a stock company to start the canning factory reported last week. E. E. Johnson can give information when anything is done.

**Memphis—Bridge.**—The contract to build a bridge over the Loosahatchie river has been awarded to the Motherwell Bridge Co., of Ohio, at \$5,995.

**Memphis—Railroad.**—The Tennessee Midland Railroad Co. have asked for permit to build through the streets to reach their proposed depot grounds, &c.

**Memphis—Mineral Water Factory.**—The Artesian Soda Co. have started a mineral water factory.

**Memphis—Dummy Railroad.**—There is talk of building a dummy railroad from Memphis to Mt. Pleasant, Miss.

**Nashville—Barrel Factory.**—J. M. Philip, of Humboldt, and others have organized a \$50,000 stock company to manufacture barrels. They have secured a site of 10 acres and commenced work on their factory.

**Nashville—Dummy Railroad.**—J. J. Lenow, S. D. Power, Enoch Dozier, Melvin Tomlin, J. C. Wilson, R. S. Turner and others have chartered the Ashland City & Nashville Dummy Railroad Co.

**Sparta—Coal Mine.**—The Bon Air Coal Co. have purchased the Bryce Little Coal Mine.

**Tallahassee—Cigar Factory.**—E. H. Williams has started the manufacture of cigars.

**Yellow Springs—Saw Mill.**—Mr. Kesterson has purchased saw mill machinery.

**Woodbury—Railroad.**—N. N. Cox, E. C. McDowell, John H. Moore, George R. Thomas and Joseph F. Dew have incorporated the Columbia Short Line Railroad Co., to build a railroad from Woodbury via Columbia to a point on the Tennessee Midland Railroad.

#### TEXAS.

**Abilene—Coal Lands.**—N. A. Taylor has secured several car-loads of machinery to be used in opening up coal lands, previously reported.

**Albany—Well.**—The commissioners' court will sink an artesian well, and are receiving bids.

**Arlington—Church.**—The Presbyterians will probably erect a church building, 34x60 feet.

**Austin—Courthouse.**—The contract to build the jail for Travis county, previously reported, has been let to L. F. Noyes, of Houston, at \$13,000.

**Austin—Bridge.**—The San Antonio & Aransas Railroad Co. (office, San Antonio) are preparing plans and estimates for a bridge to be built across the Colorado river at or near Austin. The span will be about 1,000 feet or less.

**Beaumont—Lumber Mill.**—The Reliance Lumber Co. are putting a large new Corliss engine and other machinery in their lumber mill.

**Beaumont—Tram Road, &c.**—The Beaumont Lumber Co. have purchased the Wiess Blum tram road (about 5 miles) and 15,000 acres of timber lands. They have, as stated last week, increased the capital stock from \$200,000 to \$400,000.

**Beaumont—Tram Railroad.**—The Texas Tram Lumber Co. are about commencing work on their tram railroad, previously reported.

**Blanco—Mining.**—The Perdenalis Mining Co. has been chartered.

**Canadian.**—The Kansas & Texas Land & Immigration Co. has been chartered at Manhattan, Kan., to deal in lands, lay out new towns, &c. The capital stock is \$1,000,000.

**Cleburne—Roundhouse.**—The Gulf, Colorado & Santa Fe Railroad Co. (office, Galveston) will rebuild their roundhouse previously mentioned as burned.

**Corpus Christi—Water Works.**—Water works are reported to be built soon. If correct W. P. Caruthers can probably give information.

**Dallas—Flour Mills.**—The Farmers' Alliance, previously reported as contemplating building a flour mill, have purchased the Todd Flour Mills, and will refit them with new machinery.

**Dallas—Iron Foundry.**—The Munger Improved Cotton Machine Manufacturing Co. are starting an iron foundry, and want to purchase a boring machine.

**Dallas—Hotel.**—The Tremont & Windsor Hotel Co., capital stock \$30,000, has been chartered by W. E. Hughes, John Woods, J. H. Burke, C. J. Howland and Thomas B. Gale.

**Dallas—Water Works.**—The Oak Cliff Water Supply Co. has commenced laying 10,000 feet additional of water mains.

**Dallas—Church.**—The plans for the new building for the First Baptist Church, previously reported, has been completed, and work will probably be commenced soon.

**Eagle Pass—Depot.**—The Southern Pacific Railroad Co. are preparing to build a brick depot.

**Eagle Springs—Coal Mine.**—Fink, Arthur & Co., of El Paso, have purchased the Eagle Springs Coal Mine for \$40,000, and will develop.

**Fort Worth—Grain Elevator.**—The Farmers' Alliance will, it is stated, erect a grain elevator with a capacity of 1,000,000 bushels.

**Fort Worth—Lime Works.**—Hierholzer & Co. have lately started lime works with a capacity of 800 bushels per 10 hours.

**Fort Worth—Building.**—The Farmers' Alliance will, it is stated, erect a large building to be used as an exchange.

**Fort Worth—Refrigerator.**—A meeting was lately held at Denver, Col., by parties who contemplate building a refrigerator establishment at Fort Worth or some other place in Texas. F. R. Sherwood, Denver, can probably give information.

**Galveston—Clothing Factory.**—Leopold Weis and Sylvan Miller have erected machinery to manufacture clothing.

**Galveston—Clothing Factory.**—Leon B. Smith has started a clothing manufactory at Strand and Twenty-second streets.

**Georgetown—Guano Caves.**—The Atlanta Guano Co., of Atlanta, Ga., are, it is reported, negotiating to purchase the guano caves near Georgetown with a view to developing.

**Granite—Granite Quarries, &c.**—F. H. Holloway, George W. Lacy and William H. Westfall, of Burnet; N. L. Norton, of Austin, and others have chartered the Texas Capital Granite Co., capital stock \$1,000,000, to develop granite and marble quarries, establish manufactories, &c.

**Greenville—Flour Mill, &c.**—Proposals for machinery for the flour mill previously reported to be erected by the Hunt County Co-operative Milling Association will be received until April 16. The capacity is to be 100 barrels, with power for 150 barrels, and bidders will give estimates for increasing power to 200 barrels. A corn, oats and hominy mill is reported to be added.

**Houston—Machine Shops.**—The Southern Pacific Railroad Co. will nearly double the capacity of their machine shops in the next six months. Car and locomotive building will be, it is said, added next year.

**Houston—Wells.**—The Houston Water Works Co. will sink more artesian wells. They will build a dam near their reservoir.

**Jacksonville—Canning Factory.**—W. H. Lovelady, J. L. Douglas, John H. Bolton, A. R. Wright and others have chartered the Jacksonville Canning & Evaporating Co., capital stock \$5,000, to start a canning factory.

**Lockhart—Street Railroad.**—Capt. Nix will build the street railroad reported last week.

**Longview—Canning Factory.**—A company is being formed to start a canning factory.

**Paris—Gas and Electric Light Plant.**—The Paris Gas & Electric Light Co. will enlarge their gas works, and add considerable machinery to their electric light plant.

**Paris—Electric Light Plant.**—R. E. Bradford will put an electric light plant in his hotel.

**Paris—Street Railroad.**—The Paris Street Railroad will be extended.

**Paris—Hall.**—A city hall is to be built soon, and plans have been accepted. The mayor can give information.

**Paris—Planing Mill.**—Machinery is being added to the planing mill of Henley & Ramsaur.

**Plano—Well.**—The parties who will erect the cotton compress, lately mentioned, talk of sinking an artesian well. Taylor & Wood can give information.

**San Angelo—Railroad.**—The Atchinson, Topeka & Santa Fe Railroad Co. (office, Topeka, Kan.) will extend their road from Ballinger to San Angelo.

**Sherman—Canning Factory.**—J. L. Hambrick is trying to organize a stock company to start a canning factory.

**Smithville—The Smithville Ferry Co.** has been incorporated.

**St. Jo—Flour Mill.**—The capacity of the roller flour mill lately reported to be built by the St. Jo Milling Co. will be 100 barrels daily. They will receive bids for an outfit of machinery.

**Tyler—Oil Lands.**—Petroleum has been found on the land of H. H. Rowland, near Tyler, and investigations to determine quantity, &c., will be made.

**Tyler—Depot, &c.**—The International Great Northern Railroad Co. (office, Palestine) will build a large depot, and probably make other improvements.

**Wharton—Courthouse and Jail.**—B. F. Truster has been awarded the contract to build the courthouse and jail, previously reported, at \$29,992.

**Whitewright—Flour Mill.**—Thomas Gill, of Cavlin Rock, Ill., has been prospecting with a view to building a roller flour mill.

#### VIRGINIA.

**Berkley—Brick-yard.**—A brick-yard is to be started and machinery is reported as purchased.

**Big Stone Gap—Electric Lights.**—The Big Stone Gap Improvement Co., previously reported as to build a hotel, will put electric light machinery in it.

**Big Stone Gap—Sash and Blind Factory.**—N. N. Neeham has secured a site to build a sash, door and blind factory.

**Buchanan—Timber Lands.**—W. H. Carter has lately purchased the timber on 25,000 acres of land, and has commenced developing.

**Coleman's Falls—Saw Mill.**—A saw mill has been moved to Coleman's Falls.

**Danville—Furniture Factory.**—W. P. Hodnett will commence manufacturing furniture about May 1. His factory is five stories, 40x120 feet. Will use steam power.

**Greenville—Iron Mine.**—James Steele will mine iron ore.

**Leesville—Iron Mine.**—Isaac Diller & Sons, of Lancaster, Pa., are developing the manganese iron ore mine on the land of James Camper, previously reported.

**London County—Copper Mines.**—It is reported that H. C. Stuart, of New Orleans, La. has secured an option on the Eagle Copper Mines, and will organize a company to develop them.

**Lovely Mount—Knitting Factory.**—Samuel D. Newman is president of the company previously reported as organized to manufacture knit goods, both woolen and cotton. They want to purchase machinery.

**Lovely Mount—Sash, Door and Blind Factory.**—Parties have secured a site to start a sash, door and blind factory. S. Heth can give information.

**Lynchburg—Wood-working Factory.**—Adams & Woodson have added to their factory machinery for manufacturing sash, door and blinds.

**Lynchburg—Rolling Mill.**—The Lynchburg Cotton Mill & Improvement Co. have, it is said, transferred a site to parties who will build a rolling mill.

**Lynchburg—Dye Works.**—J. T. Trimmer has erected steam dye works at 807 Main street.

**Manchester—Machine Shops.**—It is reported that the Richmond & Danville Railroad Co. (office, Richmond) will move their machine shops from Manchester to some other place.

**Martinsville—Railroad.**—A subscription of \$100,000 has been made to the Roanoke & Southern Railroad.

**North Danville—Wagon Factory.**—A wagon factory is being erected by B. F. Jefferson and R. D. Flynn.

**Otter View—Mining.**—Jones, Carr & Malone, of Roanoke, are opening mines near Otter View.

**Portsmouth—Wood-working Shop.**—The Seaboard & Roanoke Railroad Co. have purchased some new machinery for their wood-working shop.

**Portsmouth—School.**—St. Mary's Catholic Church is raising money to erect a school building. M. Duggan can give particulars.

**Richmond—Electric Light Plant.**—The Virginia Electric Light & Power Co. have enlarged their arc plant.

**Richmond.**—The bills previously reported as introduced in the legislature to incorporate the Virgin's Publishing Co.; the West End Water Co. (Petersburg); the Middletown & Capon Springs Turnpike Co.; the Virginia & Pennsylvania Iron & Coal Co.; the Scott Telephone & Telegraph Co.; the Hampton & Old Point Railway Co.; the Virginia & North Carolina Construction Co. and the Bessemer Steel & Iron Co. have become laws.

**Roanoke—Bottling Works.**—G. P. Carr is enlarging his bottling works. He contemplates erecting a larger building for his works.

**Roanoke—Round house, Machine Shop, &c.**—John Blackwell is grading for a roundhouse, machine shop, coal chute, etc., to be built by the Norfolk & Western Railroad Co.

**Saltpetre Cave—Canning Factory.**—A canning factory is being erected by H. Allen and J. Duncan.

**Suffolk—Car and Boat Works.**—A company will be chartered to build car and boat works. J. E. Booker can probably give information.

#### WEST VIRGINIA.

**Bramwell—Hotel, &c.**—The Kanawha Hotel & Improvement Co., with an authorized capital stock of \$500,000, has been chartered by William G. MacDonald, M. C. Jamison and Charles H. Mellon, of Philadelphia, Pa., and others. The company is authorized to build hotels, water works, &c.

**Charleston—Jail.**—The Pauley Jail Building & Manufacturing Co., of St. Louis, Mo., have sublet the contract for building the



mill, previously reported (except iron work), to William C. Reynolds and M. Levi.

**Charleston—Pipe Line.**—The Pittsburg Kanawha Natural Gas Co. have received permit to lay gas and oil pipes along the county roads.

**Davis—Lumber Mill.**—The Blackwater Boom & Lumber Co., lately mentioned as organized and as purchasing the mill property at Davis owned by the J. L. Rumberger Lumber Co., will increase the capacity of the mill to 10,000,000 feet per year.

**Keller—Canning Factory and Creamery.**—A company has been formed to start a canning factory and a creamery.

**Lewisburg—Canning Factory.**—Parties interested in the Lewisburg Creamery contemplate starting a canning factory.

**Nazam—Fire Brick Works, Coal Mine, &c.**—F. M. Durvin, Thomas E. Davis, John T. McGraw, George W. Curtin and Leonard Mallome, of Grafton, contemplates establishing extensive works for manufacturing fire-brick. They own 700 acres of land. They will also open coal mines and build about 30 coke ovens.

**New Cumberland—Pottery Works.**—John Porter and others will start the pottery works reported last week. They will organize a stock company.

**Ronceverte.**—The Ronceverte Building Association, capital stock \$100,000, has been incorporated by A. E. White, J. M. Price and others.

**Wheeling—Electric Light Plant.**—The Board of Gas Trustees are considering adding an electric light plant to the gas works at a cost of about \$20,000.

**Wheeling—China Works.**—The West Virginia China Co. will, it is said, enlarge their works.

**Wheeling—Depot and Machine Shops.**—The general manager Baltimore & Ohio Railroad Co. (office Baltimore, Md.) states that the company contemplates spending about \$275,000 in building the new depot and machine shops, previously reported.

#### BURNED.

**Baltimore, Md.**—The wood-working factory of Johns & Webster damaged \$5,000 by fire.

**Baltimore, Md.**—The furniture factory of Charles Hollander & Son; loss \$16,000. Will be rebuilt.

**Cookville, Tenn.**—The saw mill of O. J. Lacey & Co. wrecked by a boiler explosion.

**Florence, Ala.**—The grist mill owned by the Cypress Mills Co. destroyed by a flood.

**Fork, S. C.**—The gin of D. D. Antley.

**Hallsboro, Va.**—The tannery of Baker & Martin; loss \$7,000.

**Harrisburg, Ark.**—The gin of Judge Willis; loss \$1,000.

**Hickory, N. C.**—The planing and flouring mill of A. Whitener & Son; loss \$2,000. Will be rebuilt at once.

**Jasper, Ala.**—The mill of Thomas Long, 6 miles from Jasper, destroyed by a flood.

**Job, Ga.**—The dry kiln of B. F. Nysewader.

**Louisville, Ky.**—The dry-house at the Louisville Woolen Mills damaged \$1,500 by fire.

**Lynchburg, Va.**—The cigarette factory of J. E. Loyd & Co.; loss \$6,000.

**Sparta, Tenn.**—The saw mill of Oliver Young destroyed by a flood.

#### To Develop 20,000 Acres Florida Pine Lands.

**FARWELL, MICH., March 28, 1888.**

*Editor Manufacturers' Record:*  
We have bought 20,000 acres of pine land in Washington county, (Fla.) and shall erect a large saw and shingle mill there, probably some time in August or sooner. We shall put in a logging railroad and large dry kilns. J. E. AUSTIN & Co.

#### MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Brick machinery is wanted by A. M. L. Hawks, Mammoth Spring, A. K.

Brick Machinery.—Ivins Bros., Athens, Tenn., want catalogues and price-lists of machinery for manufacturing pressed brick and other brick-making appliances.

Canning machinery is wanted by Robert C. Patty, Macon, Miss.

Canning machinery is wanted by J. C. Magee, Greenville, Miss.

Canning Machinery.—A 12 or 15 horsepower boiler and other machinery for a canning factory is wanted T. R. Yeatman, Asheville, N. C.

Canning Machinery.—J. M. Martin, Corinth, Miss., solicits correspondence with manufacturers of canning machinery.

Cans.—T. R. Yeatman, Asheville, N. C., wants to correspond with manufacturers of cans used in canning vegetables, &c.

Clothes Pin Machinery.—Parties contemplate starting a clothes pin factory in the South and want to purchase the necessary machinery. Address G. E. L., care MANUFACTURERS' RECORD, Baltimore, Md.

Electric Light Machinery and Automatic Engines.—Catalogues, price lists, &c., of electric light machinery and automatic steam engines are wanted by H. Wellman, Catlettsburg, Ky.

Fire Apparatus.—Bids for furnishing the Marine Hospital building at Wilmington, N. C., with fire apparatus are wanted. Address S. D. Brooks.

Fire Engine, &c.—J. Alexander Preston president Board of Fire Commissioners, Baltimore, Md., will receive until April 10 proposals for furnishing one piston steam fire engine of 600 gallons capacity, with all latest improvements, and not to weigh over 6,000 pounds; two hose carriages; two sets double swinging harness, and 2,000 feet of fabric hose.

Flour and Corn Mill Machinery.—A. L. Mansfield, Dunlap, Tenn., wants catalogues, &c., of buhr and roller machinery.

Flour Mill Machinery.—The Hunt County Co operative Milling Association, Greenville, Texas, will receive proposals for machinery for their flour mill, previously reported, until April 16. The capacity is to be 100 barrels, with power for 150 barrels. Bidders will give estimates for increasing power to 200 barrels.

Flour Mill Machinery.—The St. Jo Milling Co., St. Jo, Texas, will receive proposals for machinery for their roller flour mill. The capacity is to be 100 barrels.

Knitting machinery is wanted by Samuel D. Newman, Lovely Mount, Va.

Locomotives and Cars.—The Jacksonville & St. Augustine Short Line Railway Co., Jacksonville, Fla., will shortly want to purchase standard gauge locomotives and passenger cars.

Mining Machinery.—The Standard Mutual Mining Co., Baltimore, Md., will purchase new mining machinery.

Molasses Machinery, &c.—Bryan & Miles, 60 Common street, New Orleans, La., want information about improved molasses machinery for clarifying and discoloring, and machinery for filling and gauging barrels and packages automatically.

Molding Machine.—W. R. Kivett, Oxford, N. C., will shortly want to purchase a molding machine.

Oil Mill Machinery.—The Columbus Fertilizer Co., Columbus, Ga., previously reported as to build an oil mill, want to buy machinery.

Perforating Machine.—J. L. King, Bristol, Tenn., wants to purchase a foot-power perforating machine for his printing office.

Reservoir.—Bids for building the reservoir at Columbia, S. C., previously mentioned, will be received until April 9 by William J. Cathcart.

Sash, Door and Blind Machinery.—Hart & Williamson, Asheville, N. C., want to purchase sash, door and blind machinery.

Saw and Planing Mill Machinery.—W. C. Rosenberger, Winchester, Tenn., wants to purchase an outfit of machinery for a saw and planing mill.

Saw mill machinery will probably be wanted by L. H. Elliott & Co., Myrtle, Miss.

Sewerage System.—The time for receiving proposals for building the sewerage system previously reported has been extended until April 16. The maximum extent is 20 miles. Address C. G. Latta, Raleigh, N. C.

Shingle and Lath Machinery.—Price-lists, &c., of shingle and lath machinery will be wanted by Ivins Bros., Athens, Tenn.

Water Works.—Bids for building water works at Dalton, Ga., will be received until April 16 by John Black.

Water Works.—The Camden Water Works Co., Camden, Ark., will build water works, and are prepared to receive bids from construction companies.

Wooden Boxes.—James Cash, Cleveland, Tenn., wants the address of parties who manufacture small, fine wooden boxes, used for thread, stationary, &c., finished to represent different kinds of wood, such as oak, walnut, ash, &c.

Wood-working machinery is wanted by Sims & Auchmety, Cedartown, Ga.

#### To Build New Planing Mill.

**AUGUSTA, GA., March 26, 1888.**

*Editor Manufacturers' Record:*  
A new planing mill is to be built by this company this spring, 90x120 feet, two stories.

GEORGIA RAILROAD CO.

JOHN L. COOK, Master Mec.

#### To Enlarge Cotton Mill.

**AUGUSTA, GA., March 27, 1888.**

*Editor Manufacturers' Record:*  
The J. P. King Manufacturing Co will put in say 5,920 spindles and other machinery this year, adding also 176 looms.

CHAR. ESTES, Prest.

**JACKSONVILLE, FLA., March 28, 1888.**

*Editor Manufacturers' Record:*  
We are doubling our boiler capacity and making other additions and improvements.

CITIZENS GAS & ELECTRIC CO.

#### Building Spoke and Handle Factory.

**MANCHESTER, TENN., March 27, 1888.**

*Editor Manufacturers' Record:*  
We are putting in the necessary machinery to make 50 sets spokes, 50 sets bent rims and 100 dozen handles per day. Are adding a Huyett & Smith drying apparatus with sufficient capacity to furnish dry material for above plant. Will start about May 1st.

MANCHESTER MANUFACTURING CO.

**ELIZABETHTON, TENN., March 28, 1888.**

*Editor Manufacturers' Record:*  
I am erecting a paint mill at this point. The capacity of my mills will be 1,200 pounds per 24 hours, but will increase on demand; will be running by the 15th of April Wm. Shell, Jr., has just finished a saw mill, water, capacity 8,000 feet.

M. C. CARSON.

#### Electric Light Plant.

**KEY WEST, FLA., March 26, 1888.**

*Editor Manufacturers' Record:*  
The Key West Gas Co. has arranged to add a Brush electric light plant.

JOHN JAY PHILBRICK.

#### Building Large Cigar Factory.

**RICHMOND, VA., March 27, 1888.**

*Editor Manufacturers' Record:*  
I am building a five-story cigar and cheroot factory; floor space is 20 M square feet. Have power elevator throughout the entire building, run by an Otto gas engine. Employ 600 hands.

P. WHITLOCK.

#### Enlarging Cotton Mill.

**CHARLOTTE, N. C., March 29, 1888.**

*Editor Manufacturers' Record:*  
We are adding to our plant a cotton warehouse and lapper room, with new outfit. Addition to main building 190x27 1/2 feet. 16 cards, with drawing, slubbers, speeders and 5 additional twistlers for coarse work. CHARLOTTE COTTON MILLS.

#### Will Rebuild Factory.

**BALTIMORE, MD., March 30, 1888.**

*Editor Manufacturers' Record:*  
We will start rebuilding our furniture factory just as soon as the loss has been adjusted.

CHAR. HOLLANDER & SON.

**GRAYSVILLE, TENN., March 29, 1888.**

*Editor Manufacturers' Record:*  
We propose putting in a re-saw and shingle mill as soon as arrangements can be made.

JOHN McDONALD & BRO.

**BRANDENBURG, KY., March 27, 1888.**

*Editor Manufacturers' Record:*  
We have just bored one well and struck gas and salt water and will sink several more wells shortly, and we expect to use it in Louisville, Ky., it is only 21 miles from that city. The Doe Run Natural Gas Co. struck a 10,000,000 cubic feet well last week. I think the city of Louisville will be furnished with natural gas from these Meade county wells in one year.

WEST POINT NATURAL GAS CO.

#### Furniture and Wagon Factories.

**DANVILLE, VA., March 27, 1888.**

*Editor Manufacturers' Record:*  
On or about May 1st I shall begin manufacturing cheap and medium grades of furniture. My factory is 40x120 feet, five floors. I shall use steam power. B. F. Jefferson and R. D. Flynn are building a wagon factory in North Danville, and will commence manufacturing in May.

W. P. HODSWELL.

#### Large Saw and Planing Mill to be Built.

**WINCHESTER, TENN., March 29, 1888.**

*Editor Manufacturers' Record:*  
J. B. Rosenberger, T. E. Umstead and J. W. Baker, three Northern capitalists, have purchased over 2,500 acres of long leaf virgin pine near Jasper, Ala., and will put up a large saw and planing mill at Jasper to manufacture all kinds of dressed and rough lumber. Will begin operation in about 30 days. An entire outfit of machinery will be needed. We intend to build railroad to timber and haul logs with engine. Expect to do a large business.

W. C. ROSENBERG.

#### Additional Machinery.

**HENRIETTA, N. C., March 26, 1888.**

*Editor Manufacturers' Record:*  
The Henrietta Mills will add 6,000 additional spindles at once; also, about 1,000 twistlers.

A. C.

## A Dead Town.

There is at least one dead town in the South. A resident of the place in a letter to the MANUFACTURERS' RECORD tells of its deadness, due to the absolute lack of enterprise. It is in a splendid country, surrounded by magnificent farming lands, and with energy could be made a great place. Possibly his letter may stimulate other towns in the same condition to new energy. Our correspondent writes as follows:

"This is the only real dead town that I know of. Some three years ago an organization was effected here in the nature of a bureau of information, officers elected, and the secretary requested to write up a brief history of the town and surrounding country, and have it printed for distribution North. The secretary did so, the printing costing only about \$14. The printer's fee being due and a little cash required for postage, etc., the secretary called on the members and others for the money, but 'nary' cent could be got. He paid the printer's bill, carried the circulars to his room and piled them down, where they are now, except those destroyed by bad use. None ever passed into the mails.

Take another case: The Illinois Central Railroad Co. surveyed their road to this place; had the larger part of it graded and in running order nearly here. Two men owned two acres of land near their track fit for nothing much, being low and wet. The three roads meeting here proposed building a union depot, and no vacant ground being suitable for the purpose but these two acres, proposed buying it, and offered \$5,000 for it. The owners demanded \$10,000. The company refused to pay it, and then surveyed another route via a town 12 miles east of here, adopted that route and built the road. So this town lost the road. A short time since one of the men who owned part of the land died almost a pauper, although once rich.

Should an enterprising company come here now with plenty of capital to start a cotton factory, the real estate owners would run the price up to such prices as would drive them off. You may note this a dead town.

When I can serve you, will be sure to do so. How men of means and even ordinary intelligence can do without the MANUFACTURERS' RECORD I can't see. There is more real information about the South in one issue than in any ten newspapers or magazines I have ever seen."

## Asphalt Plant to be Erected.

CINCINNATI, O., March 30, 1888.

Editor Manufacturers' Record:

The Warren-Scharf A-phalt Paving Co. will begin at once the erection of an asphalt paving plant in Chattanooga, costing about \$12,000.

S. WHINERY, Gen'l Man.

## To Build \$15,000 Hotel.

WINSTON, N. C., March 31, 1888.

Editor Manufacturers' Record:

The Piedmont Springs Co. will build a hotel this summer to cost about \$15,000.

S. E. ALLEN.

## Will Refit Flour Mill.

NASHVILLE, TENN., March 29, 1888.

Editor Manufacturers' Record:

Our contract has been let to Nordyke & Marmon Co., of Indianapolis, Ind., for a 1,500 barrel mill, to be new, and all new; 1,000 barrels of flour and 500 barrels of germless meal and grits. We will use the Hamilton-Corli engine, 28x60 inches, and 5 steel boilers, 60x16 inches. These are set in separate batteries. Everything will be as complete as money and skill can make it. We hope to have one of the best plants in the world.

E. T. NOEL.

## The Print-Cloth City.

The cotton industry at Fall River is apparently in a very prosperous condition. A correspondent of the Boston Globe writes that the market is entirely bare of stocks and most of the mills have their production sold well ahead. All danger of labor troubles of magnitude are obviated by an agreement lasting till July 1. After this date it is confidently hoped a sliding scale system of wages will be put in operation, binding both the spinners and manufacturers. The profitable nature of business is perhaps best shown in the number of new cotton manufacturing enterprises already started or projected. The following table, published by Earl & Banford, gives a good comparison of the present situation of the cotton goods industry and the situation in 1886:

	1887.	1886.
Corporations .....	38	38
Capital stock .....	\$18,543,000	\$18,139,000
Mills .....	57	55
Spindles .....	1,843,472	1,748,284
Looms .....	41,219	40,958
Employees .....	19,195	18,640
Weekly pay-roll .....	\$118,005	\$105,150
Weekly production, pieces .....	175,000	166,000
Yard cloth per annum .....	480,500,000	480,250,000
Bales cotton per annum .....	210,530	203,750
Water wheels .....	11	10
Steam engines .....	166	164
Total horse power .....	38,460	31,394
Tons coal per annum .....	139,550	105,500
Gallons oil per annum .....	172,350	164,300
Pounds starch per annum .....	1,981,000	2,103,000

The position of Fall River as a cotton manufacturing center is shown in the following table:

	Mills.	Spindles.	Looms.
United States .....	916	13,510,119	274,291
Northern States .....	667	12,366,773	236,416
Southern States .....	249	1,243,346	137,875
New England .....	485	10,454,877	215,261
Fall River .....	57	1,843,472	41,219

It is in the manufacture of print cloths that Fall River leads. The annual production of print cloths in the United States is 791,000,000 yards. Of this amount 651,000,000 yards are made in New England and 480,500,000 in Fall River. Compared with other great cotton manufacturing centers in New England it will be seen that Fall River heads the list:

	Capital.	Spindles.	Looms.	Employees.
Lewiston .....	\$4,750,000	267,342	5,823	5,068
Lawrence .....	3,750,000	335,000	6,260	8,940
New Bedford .....	5,900,000	448,004	9,440	4,175
Manchester .....	7,650,000	435,500	13,420	9,575
Providence .....	14,516,000	1,349,964	29,961	16,105
Lowell .....	18,100,000	913,475	27,250	21,537
Fall River .....	18,543,000	1,843,472	41,219	19,195

The establishment employing the largest number of hands and with the largest weekly pay-roll in Fall River is the Durfee Mill, with 1,200 employees and a pay-roll of \$7,000. In the matter of wages paid, the character of the work done, of course, regulates the compensation, but the influence of old versus new machinery is worth noting. The smallest average pay per operative is \$4 a week, paid in a mill where old machinery and young help is employed. The highest average wages is \$8.57 a week, paid in a mill making ginghams, where more skillful help is necessitated. The average pay of all the print cloth mills is \$6 a week. Taking all mills together the average of wages is \$6.14 per week. Outside of the cotton industry Fall River has \$6,000,000 invested in corporations, a number of which are more or less dependent upon the cotton industry. Among these may be mentioned printing mills, machine shops and bleacheries.

## To Start a New Town.

DECATUR, ALA., March 29, 1888.

Editor Manufacturers' Record:

Myself and associates have organized a land company to build a manufacturing town on Tennessee river at crossing of L. & N. R. and C. & T. R. R. Capital is \$1,000,000. Will begin at once laying out and grading streets, &c. E. J. ODEN.

## To Start Canning Factory.

ASHEVILLE, N. C., March 31, 1888.

Editor Manufacturers' Record:

We fully expect to start canning factory. Will organize April 3d. Will need 12 or 15 horse power boiler, kettles, pans, &c., to turn out 6,000 to 8,000 cans per day. Would like to hear from manufacturers; also of cans. ASHEVILLE CANNING CO.

## Coal Mining in North Carolina.

GREENSBORO, N. C., March 28, 1888.

Editor Manufacturers' Record:

The Egypt Coal Co., capital stock \$250,000, has been chartered at Raleigh. The purpose of the company is within four months to be raising large quantities of coal, and operate the mine on a large scale. No doubt exists as to the quantity and quality of the coal. The mine was operated during the late war by the Confederate government, and supplied the blockade runners at Wilmington. Some 40,000 to 50,000 tons were mined and proved a superior coal for gas, steaming, coking and domestic use. The coke is superior to any I have ever used, and for gas I know of none better, yielding 4.02 to 4.75 feet to the pound. Last year we used about 400 tons in our gas works here. A test was made on the Richmond & Danville Railroad, and proved superior to the coal they were using, and we hope to supply them for their business in this State when the mines are opened, which will be considerable. We also look to Wilmington for a considerable trade in coaling ocean steamers that now have to load with cotton, and then stop in at Newport News, which entails loss of time, increased insurance, pilot, &c. In addition to this we will have a large local demand from cotton factories at various points, and the trade of Charlotte, Raleigh and Durham; in fact no coal coming into the State can compete with us.

A. H. LEFTWICH.

## Will Rebuild Mill.

HICKORY, N. C., March 31, 1888.

Editor Manufacturers' Record:

Our mill, consisting of engine, planing mill and flouring mill, with a lot of grain, was burned on 26th inst; loss about \$2,000. We will rebuild at once.

A. WHITENER &amp; SON.

## Contemplate Adding Electric Light Machinery.

MONTGOMERY, ALA., March 31, 1888.

Editor Manufacturers' Record:

We contemplate adding electric lights to our cotton mills. ADAMS COTTON MILLS.

BATESVILLE, ARK., March 31, 1888.

Editor Manufacturers' Record:

The Batesville Water & Electric Light Co. is an organization, and articles of association have been filed with the secretary of State, according to the law of this State.

JOHN F. ALLEN, Pres.

## Electric Light Plant to be Erected.

CATLETTSBURG, KY., March 30, 1888.

Editor Manufacturers' Record:

We shall put up an electric light plant in our city, possibly in a very short time, and would like for manufacturers of electric light apparatus and automatic steam engines to send best prices, also circulars and other information necessary. Our city has a population of between 2,000 and 3,000 inhabitants.

H. WELLMAN.

ROGERS, ARK., April 2, 1888.

Editor Manufacturers' Record:

I have one lime kiln now in operation, capacity 50 barrels per day, and will build another at once of 80 barrels capacity.

C. A. WICKES.

STANTON, ALA., March 30, 1888.

Editor Manufacturers' Record:

Messrs. Fuller & Gandy have commenced work on a brickyard in this village.

JAS. R. MCARTHUR.

RICHMOND, VA., April 2, 1888.

Editor Manufacturers' Record:

I have received the contract to build the shoe factory at State penitentiary.

W. O. BENTON.

## To Develop Mica Mines.

EDWARDSVILLE, ALA., April 2, 1888.

Editor Manufacturers' Record:

The East Alabama Mica Mining Co. was organized March 1, and will begin operations April 5. Capital stock is \$60,000.

H. A. EEDY, Sec'y.

WINNSBORO, S. C., March 31, 1888.

Editor Manufacturers' Record:

A company has been organized in Winnsboro to manufacture the Elliott cotton gin on an extensive scale. These gins have been made here for many years by J. M. Elliott, Sr. Work will be commenced by the new company right away.

P. M. BRIDG.

NEW ORLEANS, LA., March 28, 1888.

Editor Manufacturers' Record:

Thomas & Gorman, of Houston, Texas, have contract to erect standpipe 14x100 feet for the Union Oil Co., at Gretna, La.

T. &amp; G.

SALEM, N. C., April 1, 1888.

Editor Manufacturers' Record:

I am building a saw mill and will be ready for work in a few days.

J. S. PEAFF.

LYNCHBURG, VA., April 2, 1888.

Editor Manufacturers' Record:

We have just put in a full line of machinery for manufacturing sash, doors and blinds.

ADAMS &amp; WOODSON.

## Foreign Exchange Quotations.

ALEXANDER BROWN &amp; SONS.

BALTIMORE, April 4, 1888.

Sterling.	Commercial.
60 days .....	48 1/2%
3 days .....	48 1/2%
Francs.	Commercial.
60 days .....	51 1/2%
3 days .....	51 1/2%
Reichmarks.	Commercial.
60 days .....	95 1/2%
3 days .....	96
Guilder.	Commercial.
60 days .....	40 1/2%
3 days .....	40 1/2%

## Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN &amp; SONS, Bankers, Baltimore.

BALTIMORE, April 4, 1888.

	BID.	ASKED.
Virginia 6's Consols C .....	96	97
Virginia 3-4 10-40's .....	96	97
Virginia 3's, new .....	96	97
Virginia Consol Coupons .....	96	97
Virginia 10-40 Coupons .....	96	97
N. Carolina 4's .....	93	94
N. Carolina 6's .....	93	94
Charlotte, Col. & Aug. 1st 7's .....	111	112
W. Va. Col. & Aug. 1st 7's .....	111	112
Atlanta & Char. 1st 7's .....	110	111
Atlanta & Char. income 6's .....	101	102
Col. & Green, 1st 6's .....	100	101
Va. Midland, 1st 6's .....	101	102
Va. Midland, 2d 6's .....	101	102
Va. Midland, 3d 6's .....	101	102
Char. C. & Aug. 1st 7's .....	111	112
West Va. Central, 1st 6's .....	106	107
Ga. Pacific 1st 6's .....	106	107
Ga. Pacific 2d 6's .....	106	107
Western N. Carolina Cons'd 6's .....	98	99
Cape Fear & Y. Valley 6's .....	97	98

## Cotton Yarns and Warps.

Single skeins:		
6s to 10s	.....	17 1/2%
12s to 20s	.....	17 1/2%
20s to 25s	.....	17 1/2%
30s	.....	17 1/2%
40s	.....	17 1/2%
2-ply 2s, skeins		10 1/2%
10s,	.....	17 1/2%
12s,	.....	17 1/2%
14s,	.....	17 1/2%
20s,	.....	17 1/2%
24s,	.....	17 1/2%
26s,	.....	17 1/2%
40s,	.....	17 1/2%
3, 4 and 5-ply 2s		10 1/2%
Soft twist, single skeins:		
6s to 10s	.....	16 1/2%
12s to 20s, cop	.....	17 1/2%
12s to 20s	.....	17 1/2%
26s,	.....	17 1/2%
40s,	.....	17 1/2%
Single chain warps:		
12s	.....	16 1/2%
14s	.....	17 1/2%
16s to 20s	.....	18 1/2%
22s	.....	19 1/2%
26s	.....	22 1/2%
30s	.....	25 1/2%
Two-ply chain warps:		
12s	.....	17 1/2%
14s	.....	20 1/2%
20s	.....	23 1/2%
26s	.....	25 1/2%
30s	.....	26 1/2%
New York and Philadelphia quotations furnished by Buckingham & Paulson, 33 Leonard street, New York; 115 Chestnut street, Philadelphia, Pa.		
Exeter Place, Boston.		April 9, 1884.



**To Build Railroad.**

JACKSONVILLE, FLA., March 27, 1888.

*Editor Manufacturers' Record:*

We will commence to build our road shortly, standard gauge, and we shall make it one of the finest equipped roads in the South, and later on we will build further South. We hope to have the road in running order by January 1, 1889.

JACKSONVILLE & ST. AUGUSTINE  
SHORT LINE RAILWAY.**Contemplate Building Cotton Mill.**

LA GRANGE, GA., March 28, 1888.

*Editor Manufacturers' Record:*

The La Grange Oil Co., of this place, propose to enlarge their business and attach cotton manufacturing, and they are now making subscription for stock of this kind, so as to enlarge from capital stock of \$40,000 to \$150,000 placing \$110,000 in cotton mill, etc.

J. L. ROBERTSON.

**Improving Lumber Mill.**

ELLISVILLE, MISS., March 27, 1888.

*Editor Manufacturers' Record:*

We are putting in new 40 horse-power boiler and 30 horse-power engine, and one fast feed flooring machine, and have boiler and engine placed, and planer on way. This will give us in addition to our saw mill of 20 M feet daily capacity, two planers, one molder, which will drive from new machinery, instead of from saw mill direct.

ELLISVILLE LUMBER CO.

**Brick Works**

ATHENS, TENN., March 30, 1888.

*Editor Manufacturers' Record:*

We expect to make 30,000 brick per day with a sword machine. Want to make about 6,000 of each day's work extra pressed brick; and want prices and illustrations of press brick machine. Also, other brick making appliances. Will probably add shingle machine and lath machine, and want prices and designs of these.

IVINS BROS.

**100-Barrel Flour Mill to be Built.**

ST. JO, TEXAS, March 24, 1888.

*Editor Manufacturers' Record:*

A stock company has been formed to erect and operate a patent roller mill of 100-barrel capacity. The necessary grounds have been purchased, and work will begin at once. The corporation is known as the St. Jo Milling Co. The machinery has not been purchased yet, but the company is ready for bids from manufacturers of roller mill machinery.

J. D. BELLAR.

**To Build Water Works.**

CAMDEN, ARK., March 26, 1888.

*Editor Manufacturers' Record:*

We have filed articles of association, and are now making definite arrangement for putting in a \$30,000 plant of pumps, piping, etc., looking to the supplying of the city of Camden with good pure water. We propose to begin work of construction not later than May, and are now prepared to receive estimates from construction companies.

CAMDEN WATER WORKS CO.

MAMMOTH SPRING, ARK.,  
March 26, 1888.*Editor Manufacturers' Record:*

A brick yard is being talked of in this place to make from 15,000 to 25,000 brick per day by machinery; and a superintendent for same is also being sought. Correspondence relative to machinery, etc., should be sent to A. McL. Hawks, of this place.

J. M. ARCHER.

**Will Enlarge Electric Plant.**

LYNCHBURG, VA., March 29, 1888.

*Editor Manufacturers' Record:*

I shall increase the capacity of the present incandescent plant to 600 lights, perhaps more. The plant will be run by water power—Victor turbine.

CECIL P. POOLE.

**C. R. MAKEPEACE & CO.**  
**ARCHITECTS and MILL ENGINEERS**  
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woollen Mills.

LOCKWOOD, GREENE &amp; CO.

**MILL ENGINEERS,**  
NEWBURYPORT, MASS.

PLANS AND SPECIFICATIONS FURNISHED FOR THE CONSTRUCTION, EQUIPMENT AND ORGANIZATION OF COTTON AND WOOLLEN MILLS.

**WM. O. WEBBER.**

Mill and Consulting Engineer,

88 MASON BUILDING, - BOSTON, MASS.

SPECIALTIES.—Measurement of power. Designing and installation of motive power and manufacturing plants. Hydraulic Engineering.

**SITUATION WANTED**

BY A  
**Stenographer and Type Writer,**  
who is familiar with book-keeping and office work in all its details. Can furnish unexceptional references from present employers. Address,  
A. L. WHEELER,  
44 Chamber of Commerce, Baltimore, Md.

ROBT. S. MCCORMICK, President.  
**Lenox Law & Collection Co.**  
ROOMS 53 & 54, 88 WASHINGTON ST., CHICAGO.

We respectfully solicit Collections from Bankers, Merchants, Corporations and Individuals. Refer to any Bank in Chicago.

P. E. STANLEY, Sec'y & Treas.  
S. P. MCCONNELL, Attorney.

**SAN ANTONIO, TEXAS,**

Is an excellent location for manufacturers in nearly every line. For investors, climate seekers and immigrants unsurpassed. An extra opportunity for Canning Factories. For descriptive pamphlet address  
L. M. Secy. Citizens' Association,  
SAN ANTONIO, TEXAS.

**West Point, Va.**

A growing town. Property increasing in value. Factories invited.  
New enterprises exempt from taxation.

Splendidly located on York river.

**Steamer lines to Europe, New York**  
—Baltimore, &c.—

Oysters and fish in unlimited abundance. Surrounded by the great fruit and trucking country of Virginia. For any particulars desired, address,  
E. WILKINSON, MAYOR.

**Eufaula Manufacturing**  
—AND—  
**Improvement Co.**

Capital Stock, \$100,000. EUFAULA, ALA.

This Company has been organized for the purpose of AIDING AND ENCOURAGING

**MANUFACTURING AT**  
**EUFAULA, ALA.,**

and will invest its capital with parties desiring to start Cotton and Bagg Mill, Commercial Fertilizer Factories, or any other branch of manufacturing. Persons desiring to make investments of this character would do well to correspond with this Company. Address

GEORGE C. MCCORMICK, Sec. & Treas.  
or E. B. YOUNG, President.

**THE GARDEN SPOT OF ALABAMA.**

Unsurpassed by any other Place in the United States.

A Pamphlet giving a partial description of BREWTON and its surroundings, its unequalled climate, the many advantages for capital seeking investments in farming or factories, will be sent free, on application to

BREWTON, ALA.  
March 24, 1888.H. H. MALONE,  
C. F. RANKIN,  
C. D. HENDERSON.**GREEN FOREST,**  
Rockbridge County, Va.

Best location in the State for a Furnace. Vast beds of rich Buena-Vista iron ore at hand. Coke at less than three dollars per ton. Eight acres for a site offered FREE on the S. V. R. and the R. & A. Railroad.

Best location for a Paper Mill. Supply of soft wood unlimited. Two acres FREE for a site.

Best location for a Woollen Mill. One acre FREE for a site. Large water power available. Write to

B. C. MOONAW.

**ELIAS EDMONDS,**  
**Attorney at Law**

SAN ANTONIO, TEXAS.

Makes the Litigation of Land Titles a specialty. Will also Lend Money for non-residents upon the best real estate security.

**WATER WORKS**

Sealed proposals will be received by the Board of Aldermen of Goldsboro, N. C., until April 25, 1888, for supplying said City with a bountiful supply of water both for fire and domestic purposes. The Board reserves the right to reject any and all bids. For full information and specifications for said works, address

NATHAN O'BERRY,

Chairman Water Works Committee.

**JACKSON, Miss.**

The Capital of the State, is centrally located on Pearl river.

The Illinois Central Railroad crosses the Vicksburg & Meridian (a part of the Queen & Crescent System) here. The Natchez, Jackson & Columbus Railroad ends here at present. This is also the terminus of what is known as the Yazoo Valley Branch of the I. C. R. R. JACKSON is likely to be the terminus of one, - perhaps two other roads in the near future.

The Pearl River bottoms are covered with fine timber, - Pine, Cypress, Ash, Poplar, Hickory, White Oak and Gum, which can be floated to our door.

The Climate is Delightful, and the soil well adapted to Horticulture, Hay, Grain and Cotton.

A Board of Trade, recently organized, composed of a large number of our best business men, are determined to

Encourage all Kinds of Manufactories.

They will subscribe liberally, and cordially invite capitalists desiring investments to examine our resources and opportunities.

For information on these and other subjects address

P. W. PEEPLES,  
Pres't Board of Trade.

**To Capitalists, Manufacturers & Machinists.****WANTED.**

At MORGAN, BOSQUE CO., TEXAS,

**A Roller Mill** Capacity not less than 100 barrels. Will donate grounds, water and \$1,000; or take \$3,000 in stock. Sufficient wheat for said mill can be purchased in our market, and at least one-half of products can be sold at mill. Also, A WOOLEN FACTORY, not less than 15 looms. Will donate sufficient grounds and water, and will take one-third stock. Wool for factory can be bought in our town. All products of factory can be sold in Bosque and adjoining counties. We believe 25 to 35 per cent. net profit can be made in each of these enterprises. We have many advantages over any other location. For information address J. W. Gilpin, Mayor, or Thos. F. Lockett, President Morgan Water Works & Ice Co.

**Interesting to Travelers South.**

The section of the South attracting by its wonderful development and prosperity the attention of the whole world is traversed by the Queen & Crescent Route, (Cincinnati Southern and Associate Roads) Express trains, the fastest in the South, leave Cincinnati daily at 7:55 A. M. and 8:00 P. M. for Chattanooga, Birmingham, Atlanta, Decatur, Gadsden, Tuscaloosa, etc. When going South, do not fail to procure from your nearest agent tickets which read via Cincinnati and the Queen & Crescent Route. Inquiries promptly responded to by H. Colbran, General Passenger Agent, Cincinnati.

**CHEAP FARMING LANDS SOUTH**

It is a recognized fact that the cheapest farming lands in America to day are in the South, and men of much or moderate means looking for real estate investments, or permanent homes, should not fail to visit the following points, where so many northern people are now settling, viz: Jackson, Tennessee; Aberdeen and Jackson, Mississippi; Hammond, Crowley, Jennings, Welsh and Lake Charles, Louisiana. Round-trip tourist tickets, limited to June 1st, 1888, with stop over privileges south of Cairo, Illinois, are on sale to New Orleans, Jennings and Lake Charles. For rates apply to nearest ticket agent, and be sure your tickets read via the Illinois Central Railroad from Chicago or St. Louis. For pamphlet entitled "Southern Home-Seeker's Guide," and circulars concerning the above named points, address the undersigned, at Manchester, Iowa.

J. F. MERRY.

Gen. West. Pass. Agt.

**Blast Furnaces Wanted.**

The Athens Mining & Manufacturing Co., Athens, Tenn., are erecting \$500,000 new manufacturing improvements upon their property, and are opening, with a new railroad, the finest iron fields in the South. They desire to have one or more blast furnaces located at Athens, and make the following offers to iron manufacturers and capitalists:

1. They will donate an excellent site free of cost, and in addition will give \$10,000 cash subsidy upon closing of contract and execution of satisfactory bond for the erection, as soon as practicable, of a furnace with 100 tons daily capacity; or will donate site and subscribe for \$25,000 stock. The same offers are made proportionately for furnaces of less capacity.

2. They will lease the mines upon royalty or will deliver at furnace both red and brown ores, superior in quality to any at present mined in the South, and which will yield not less than 50 per cent. in the furnace, at say \$1.35 to \$1.50 per ton, or anyway 10 per cent. less than ores proportionately rich cost Chattanooga furnaces. They will contract to deliver any number of tons daily. Lowest freight rates will be obtained on manufactured products to markets.

The finest limestone can be had on the property for cost of quarrying.

Coke can be had at Chattanooga prices. Analysis of the ores will be furnished upon application. No place in the United States has better advantages than Athens for the cheap manufacture of superior iron.

The company reserves the right to select any one or two of such propositions as may be received.

Correspondence solicited.

R. J. FISHER, Treas. and Gen'l Man.

### 160,000 Acres Pine Lands to be Developed.

CAMDEN, ARK., March 26, 1888.

Editor Manufacturers' Record:

We have contracted 160,000 acres Arkansas pine lands to a syndicate of lumbermen of Chicago, who propose to develop same.

We have estimated 200,000 acres more that will average 6 M feet, and for which we have applications.

J. B. FRIEDHEIM & Co.

### Smoking Tobacco Factory.

HENDERSON, N. C., March 28, 1888.

Editor Manufacturers' Record:

The smoking tobacco factory is to be operated by Hicks, Briscoe & Co., and they will begin work just as soon as they can get everything in readiness. It may be within the next ten or fifteen days that operations will be commenced.

THAD. R. MANNING.

### Machine Shop.

MURFREESBORO, N. C.,  
March 28, 1888.

Editor Manufacturers' Record:

Mr. E. C. Worrell has purchased an iron planer and other machinery and will establish a machine shop.

Mr. E. A. Buell has put to work a planing machine at his saw mills on the Meherrin river here.

Brick are being manufactured for a \$17,000 additional building for the Chowan Baptist Female Institute.

JOHN W. HICKS.

CHATTANOOGA, TENN., March 28, 1888.

Editor Manufacturers' Record:

We will erect separate works for our Emmensite powder works. They are in no way connected with Dixie Powder Co. Our works will be more of an experimental nature at present than otherwise.

C. W. HOWARD.

### The Best Steam Pumps FOR EVERY SERVICE.



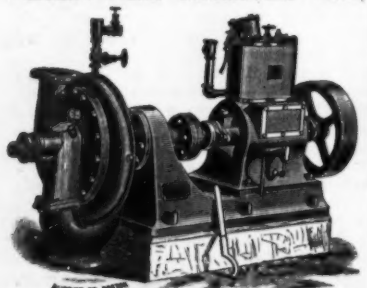
MANUFACTURED BY

The Hooker-Colville Steam Pump Co.

1101 N. 2d STREET,

Send for Catalogue. ST. LOUIS, MO.

### WEBBER'S STEAM CENTRIFUGAL PUMP,



Giving greater efficiency than any other Pump in the market. Send for Catalogue.

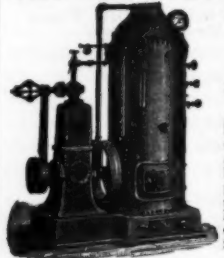
LAWRENCE MACHINE CO.

Mason Building, BOSTON, MASS.

New York Office, 17 CORTLANDT ST.

Agents—J. Post, Jr. & Co., Boston, Mass.; Fairbanks & Co., St. Louis, Mo.; H. P. Gregory & Co., San Francisco, Cal.; R. H. Buchanan, Montreal, P.Q.

### The CASTLE Engine.



The Engine

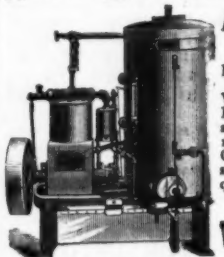
FOR THE PEOPLE.

Nothing to get out of order.

3 horse-power steel boiler and a horse-power engine, \$175. 4 horse-power steel boiler and 3 horse-power engine, \$260. 5 cylinder engines at low prices. High class boilers. Send for circulars.

Castle Engine Works, Indianapolis, Ind.

### Acme Kerosene Engine.

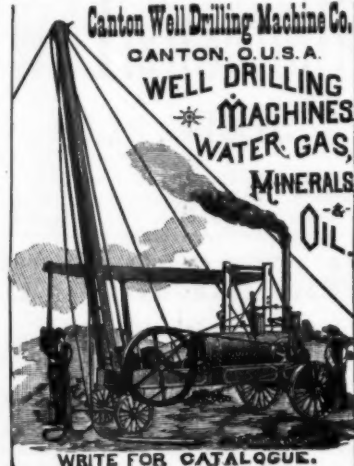


A Perfect Success.

For running Printing Presses, Pumping Water, Farm Use & Light Machinery of all kinds, also Boats. 1 to 4-horse power. Clean and Safe. No skilled engineer required. Send for Circular.

W. E. ROBERTSON,

48 S. Canal St., Chicago.



WRITE FOR CATALOGUE.

### THE Sigourney Tool Co. HARTFORD, CONN.



One, Two and Three

Spindle DRILLS.

Sensitive,

STRONG

—AND—

Workmanship UNEQUALLED.

Special Machinery, Tools, Models, &c. Built by Day or Contract.

### STEEL RAILS

Logging, Mining and Plantation

RAIL AND TRAM ROADS.

Light Sections Rails and Spikes in stock.

Locomotives, Logging Cars, etc.

NEW AND SECOND HAND.

HUMPHREYS & SAYCE,

OFFICE NO. 1 BROADWAY, N. Y.

### FOR SALE—SECOND-HAND Railway Equipment.

We offer the above at low prices for cash or on easy terms or Car Trust; or will exchange for good securities. Whether you wish to buy, sell or trade, it will pay you to write us for full particulars.

THE NEW YORK EQUIPMENT CO.

Successors to Walkley & Co.

10 WALL STREET, NEW YORK.

JAMES IRVING, Pres. L. V. WALKLEY, Secy.

### Second-hand Machinery in Good Order. FOR SALE CHEAP.

- 1 Engine Lathe, 30 in. x 20 ft.
- 1 Engine Lathe, 26 in. x 24 ft. Triple Geared.
- 1 " 36 in. x 7 ft. 1 Engine Lathe 18 in. x 8 ft.
- 1 " 24 in. x 20 in. and 24 ft.
- 1 " 24 in. x 18 in. bed. Field.
- 1 " 30 in. x 25 ft.
- 1 " 24 in. x 15 and 16 ft.
- 1 " 28 in. x 20 ft.
- 1 " 22 in. x 20 and 22 ft.
- 1 " 18 in. x 10 ft.
- 1 " 20 in. x 10 ft.
- 1 " 20 in. x 12 ft.
- 1 each 16 in. x 6, 8 and 10 ft.
- 6 " 14 in. x 6 ft.
- 1 " 18 in. x 5 ft.
- 4 " 15 in. x 6 ft.
- 1 " 11 in. x 4 ft. and 5 ft.
- 1 " 10 in. x 3 1/2 ft. Foot power
- 1 Brass Turret Lathe.
- 1 Planer, 24 in. x 24 in. x 5 and 8 ft.
- 1 " 30 in. x 30 in. x 8 ft.
- 1 Planer, 36 in. x 36 in. x 9 ft.
- 1 Screw Planer, 18 in. x 3 ft.
- 1 " 36 in. x 8 ft.
- 1 Shaper, 6-in. stroke. 1 1/2 in. Shaper, two tables.
- 1 each 12, 15, 20 and 28 in. stroke.
- 1 Crank Planer. 6 Lincoln Pat No. 2 Millers.
- 1 each 3 and 6 Spindle Gang Drill.
- 1 each Nos. 1 and 2 Screw Machines. Wire Feed.
- 1 Pratt & Whitney. Good as new.
- 1 375-lb. Drop Hammer. Beecher & Peck.
- 1 45-lb. Vertical Hammer.
- 1 No. 33 Ferracute Press. 1 Nut-Facing Machine.
- 10 Foot Presses, assorted. 8 Power Presses, assorted.
- 10 Punching and Shearing Machines, assorted.
- 1 Return Tubular Boilers, 35 H.-P.
- 1 National Bolt Cutter, sizes 1/4 in. to 1 in.
- 1 Bolt Cutter, 1/4 in. to 1 1/4 in. Good order. Ad. head. Merriman.
- 1 Bolt Cutter, 1/4 in. to 2 in. Ad. head. Sellers.
- 1 each Nos. 2 & 3 Garvin Hand Millers. Good as new.
- 1 Horizontal Engine each 25 and 45 H.-P.
- 1 24 and 8 H. P. Portable Engine.
- 1 Spindle Profiling Machine.
- 1 Horizontal Boring Machine, 36 in. x 6 ft.
- 1 No. 3 1/2 Stiles & Parker Presses.
- 1 36-in. Band Saw. Rogers.
- 1 Power Mortising Machine.
- Also full line of New Machinery.
- New York Agency TAYLOR MFG. CO., Engines, Boilers, &c. Correspondence solicited.
- PRENTISS TOOL AND SUPPLY CO., P. O. Box 106. No. 45 Day St., New York City.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year, or six months for \$2 00

### FOR SALE.

- 1 36-in. 1 Beater Breaker Lapper. } English.
- 1 36-in. 1 Beater Finisher Eveners. }
- 1 36-in. 3 Beater Kitson, with preparator.
- 1 36-in. 3 Beater, Whiting's.
- 1 36-in. 2 Beater, Whiting's.
- 1 30-in. 2 & 3 Beater, Whiting's.
- 1 30-in. Welman Stripper, Whiting's Cards.
- 1 30-in. Welman Stripper, Saco Water Power.
- 1 30-in. Welman Stripper, Whiting's.
- 1 30-in. 1 Beater Breaker Lapper. } English.
- 1 30-in. 1 Beater Finisher Eveners. }
- 100 Spinning Frames, 1 1/2 in., 1 3/4 in., 2 in. & 2 1/2 in. common, Spindle Taper, Rabbit Sawyer Spindle.
- 50 Twisters, 1 1/2 in., 1 3/4 in., 2 in., 2 1/4 in., 2 1/2 in., 3 1/2 in. Ring.
- 20 Spoolers of different makes.
- 16 Carpenter Reels.

All this machinery is first-class. For further particulars apply to

L. GODFREY & CO. PROVIDENCE, R. I.

### IT WILL PROVE

To investigate the proven merits of

THE HARRISON SAFETY BOILER

Before purchasing your steam plant.

Address, Harrison Safety Boiler Works, Southern 2 & 4 S. Pryor St. Philadelphia, Penna. Office, Atlanta, Ga.

TO YOUR INTEREST

### Charcoal For Sale.

Contracts taken for large quantities, supplied from line of S. V. R. R. in Va. Address, with offer for one month,

C. W. S. TURNER,

932 N. Y. Ave., N. W. Washington, D. C.

### FOR SALE.

A complete line of

Cooking & Heating Stove Patterns

FOLLOWBOARDS AND FLASKS,

Address LOCK BOX 117, Ironton, Ohio.

### Cotton and Woolen MACHINERY.

50 Crompton Fancy Cotton Looms, 36 inch reed space for 12 Harnesses, 1 to 4 Box, nearly new.

In my Store Houses here can show 2 ACRES of flooring covered with good machinery. Have full systems for both Cotton and Woolen Mills. Send for full list.

JEREMIAH CLARK,

Lowell, Mass. Office, 108 Middle St.

### FOR SALE. Second-Hand Machinery.

We offer for sale 4 Fly Frames (Higgins), 120 spindles each. 8 inch traverse. Two Slubbers (Higgins), 68 spindles each, 10 inch traverse.

The above is now running in our mill, and we can deliver it about May or June. We also offer 33 Whittin 36 inch Sheet Looms, which we can deliver at once. All this machinery is in good order.

W. H. BALDWIN, JR. & CO. SAVAGE, HOWARD CO., MD.

### Cotton Machinery FOR SALE.

Needing the room for our waste business, we offer for sale our yarn machinery, composed of lappers, cards, railway heads, drawing roving, spinning, sootling and twisting frames, warpers, reels, ball-winders, rope machine, yarn-tester, with shafting, hangers, pulleys, belting, bobbins, spools, cams, &c., &c.,—a complete carpet warp mill in every particular. We have 2,400 spindles, two-inch rings, capable of producing thirteen thousand pounds of carpet warp in sixty six (66) hours. The machinery is in splendid condition, and can be seen at work at our mills, in the city of Augusta, Ga., until May, to which time we are under contract to one party for the entire product of the mill. The yarn made on this machinery stands second to none in the Eastern markets, which evidences the condition of the machinery. This is a rare opportunity to secure a completely equipped mill, with everything ready at hand, at much less expense than new machinery alone would cost. This machinery was all new less than seven years ago.

For further particulars apply to THE RIVERSIDE MILL, AUGUSTA, GA.



## LATHE HEADS.



FOR WOOD OR IRON TURNING.

STRONG, STIFF, SUBSTANTIAL.

Steel Arbors and Screws, Emery Grinders and Gear Cutting Attachments,

**Progress Engine & Machine Works**

M. C. R. R.

SUMMERFIELD, MD.

**HILL, CLARKE & CO.**

DEALERS IN

**Machine Tools,**

ENGINE LATHES,

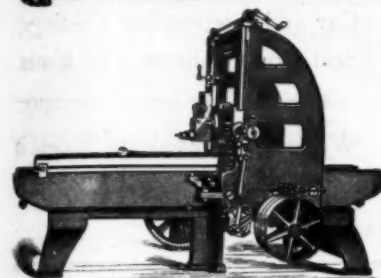
Iron Planers, Upright Drills,

MILLING MACHINES,

Bolt Cutting Machines,

Special Railroad Tools, &amp;c.

156 to 164 BOSTON, MASS.

BRANCH OFFICE,  
Bank of Commerce Building, St. Louis, Mo.**Build or Repair Your Machinery**

BY USING

Engine Lathes, Planers,  
Chucking Lathes, Hand Lathes,

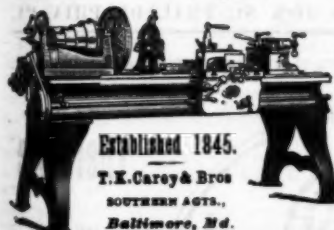
—AND—

MACHINE TOOLS GENERALLY

MANUFACTURED BY

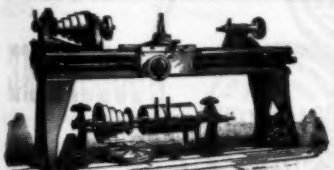
**LATHE & MORSE TOOL CO.**

Worcester, Mass., U. S. A.



Established 1845.

T. K. Carey &amp; Bros

SOUTHERN AGTS.,  
Baltimore, Md.17, 24 & 27-INCH  
**Engine Lathes**

New Designs.

THE MULLER MACHINE TOOL CO.

8th and Evans Streets,

CINCINNATI, O.



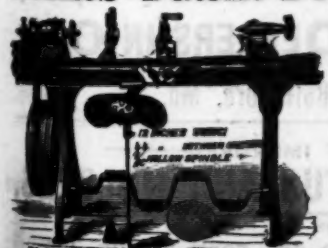
Sebastian, May &amp; Co.'s Improved Screw Cutting

**FOOT AND LATHES POWER**Drill Presses, Shapers, Band, Circular and Scroll  
Saws, Machinists' Tools and Supplies. Lathes  
on trial. Catalogue mailed on application.

152 West Second Street, CINCINNATI, O.

**Barnes' Patent Foot Power Machinery.**Complete outfit for Actual Workshop Business. Lathes for Wood or  
Metal. Circular Saws, Scroll Saws, Formers, Mortisers,  
Tenoners, Etc., Etc.

Our Patent Velocity Foot-Power is without question the best yet  
applied to Lathes. Read a few expressions from those using them:  
"I do not see how your lathes can be produced at so low cost."  
"The velocity foot-power is simply elegant." "Can turn a whole day,  
and feel as little tired as though only walking around." "In regard  
to the velocity foot-power, I consider the lathes without an equal."  
"I set at the lathes for 11 hours, cutting off and threading 1 1/2 steam  
pipes. Those who saw it declared it equal to 15 hour job in machine  
shop." "Using the velocity foot-power, the operator can hold a steady  
hand for doing the work." "For doing actual business, the lightest or  
the heaviest, give me the velocity foot-power." "The 4 1/2 lathes is  
equal to any costing twice the money." "What astonishes me is, how  
we can make machines to pay you for so small sum of money." "The  
No. 6 Lathes is the most perfect tool I ever saw for the money." "I can  
do double the amount of work on the velocity, than I can on any  
other style of foot-power lathes." "There is no tax on strength, the  
body is at rest, steady, the hands and attention free for the job."  
"The velocity—It is the best foot-power of any for lathes."



If desired, these machines will be sold ON TRIAL. The purchaser can have ample time to test  
them in his own shop and on the work he wishes them to do. Descriptive Catalogue and Price-List  
W. F. & JOHN BARNES CO., No. 221 Baby St., Rockford, Ill.

**WILLIAM SELLERS & CO. INCORPORATED.**  
PHILADELPHIA, PA.

BUILDERS OF

**Machine Tools For Working Iron and Steel.**

Improved Turntables for Locomotives, Cars and Pivot Bridges.

High Speed Power Traveling Cranes, and Hand or Power  
Swing Cranes. Shafting, Pulleys, Hangers, &c. for transmission  
of power. Improved Self-Adjusting Injector of 1876. Self-Acting  
Injector of 1887. Fixed Nozzle Automatic Injector of 1885.

Injectors for all conditions of Locomotive and Stationary Service.

**BRADLEY'S UPRIGHT CUSHIONED & HEATING FORCES  
HELVE HAMMER**

With a manufacturing experience of over half a century,  
we recommend these machines to be the best, simplest,  
most durable and combining all the essential elements.

ESTABLISHED 1832

BRADLEY AND COMPANY, SYRACUSE, NEW YORK.

**D. SAUNDERS' SONS**

MANUFACTURERS OF

Pipe Cutting and  
Threading Machines,  
For Pipe Mill and Steam  
Fitters' Use.

Tapping Machines

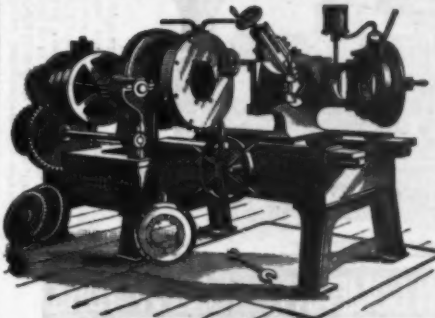
For Steam Fitting. Also,

STEAM AND GAS FITTERS

HAND TOOLS,

Athenon Street.

Send for Catalogue B.



SEND FOR CIRCULARS.

YONKERS, N. Y.

**SAWYER-MAN ELECTRIC CO.**

Licensed by and Succeeding to the Commercial Business of the

**CONSOLIDATED ELECTRIC LIGHT COMPANY.**

OWNERS

OF THE

**SAWYER-MAN**

PATENTS.



GENERAL OFFICES:

Mutual Life Building,  
No. 28 Nassau St., N. Y. City.

BALTIMORE OFFICE:

No. 217 E. Fayette St.

PHILADELPHIA OFFICE:

No. 205 Walnut Place.

BOSTON OFFICE:

No. 33 Federal Street.

The DYNAMO of this Company is AUTOMATIC in its regulation, and will maintain a  
UNIFORM LIGHT, with ALL or ANY PORTION of the lights in Circuit. Our LAMP will not  
BLACKEN and will MAINTAIN its CANDLE POWER during its Guaranteed life.

Plans and Estimates furnished for all kinds of Incandescent Lighting  
ESTIMATES FURNISHED FOR THE THOMSON-HOUSTON SYSTEM OF ARC LIGHTING.

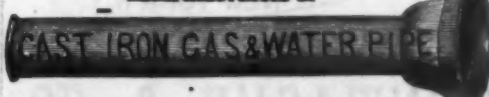
**South Pittsburg Pipe Works.**

Geo. E. Downing, Pres.

James Bowron, Vice-Pres.

Dr. W. R. Townsend, Secy.

Manufacturers of



CAST IRON GAS &amp; WATER PIPE

South Pittsburg, Tenn.

WARREN WOOD &amp; CO.

116 Broadway, N. Y.

EASTERN AGENTS.

**CHATTANOOGA FOUNDRY & PIPE WORKS.**

DAVID GILES, Pres.

C. B. Bester, Vice-Pres.

M. Llewellyn, Secy. and Treas.

Successors to D. GILES &amp; CO., Chattanooga, Tenn., Manufacturers of



CAST IRON GAS &amp; WATER PIPE

Also Castings and Pat-

terns of Every Descrip-

tion made to order.

Advertise in the **MANUFACTURERS' RECORD.**

**HOOPE & TOWNSEND,**

MANUFACTURERS,

**KEYSTONE BOILER RIVETS,**Cold Punched, Chamfered, Trimmed and  
Drilled Square and Hexagon Nuts.

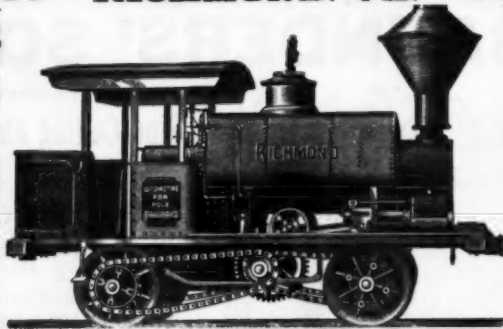
Finished and Case-Hardened Steel Hexagon Nuts.

**BRIDGE RODS and RIVETS.****Builders' IRON Work.**

TANK and COOPERS' RIVETS.

**PHILADELPHIA, PA.**

ESTABLISHED IN 1865.

**The Richmond Locomotive & Machine Works,**  
RICHMOND, VA.SUCCESSORS TO THE  
Tanner & Delaney Engine Company.Having added to their extensive plant a large  
number of special tools, they are now  
equipped to build and repair all kinds of  
the latest and most approved designs: Light  
Locomotives, Passenger, Freight, Tramway,  
Noiseless Street Motors and Mine Engines.Also Portable Road Locomotives, the only success-  
ful device of the kind made. Engines, Stationary  
and Portable, as to go horse power. Boilers,  
Standard and Special, as to go horse power.  
Gas, Water, Circulating and other Heavy Ma-  
chinery. Correspondence invited. Catalogues,  
specifications, drawings and estimates fur-  
nished on application.**JOHN STEPHENSON COMPANY NEW YORK****TRAMWAY CARS** OF EVERY DESCRIPTION  
LIGHT, ELEGANT, DURABLE**STEEL RAILS****PENNSYLVANIA**Standard Sections  
Light Sections  
Street RailsFish Plates,  
Frogs, Switches**STEPHEN W. BALDWIN**  
SALES AGENT**STEEL COMPANY**

50 to 80 lbs. per yard

16 " 45 " " "

30 " 88 " " "

Bolts & Nuts,  
and Crossings.**NO. 2 WALL STREET**  
NEW YORK N.Y.

16 lbs. Full Size.

**MONTAGUE & CO.**

MANUFACTURERS OF

\* **FIRE BRICK,** \**Standard Sewer Pipe*

AND CULVERT PIPE.

Double Strength, with Improved Sockets.

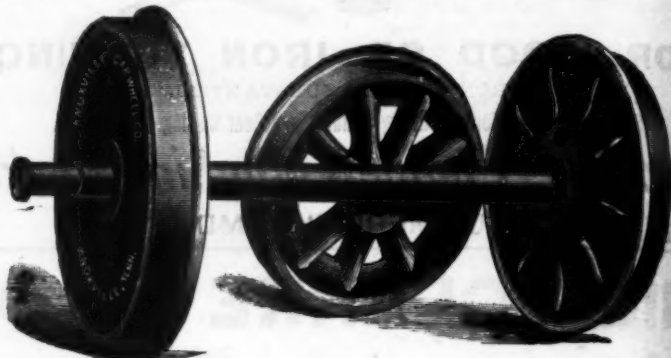
**CHATTANOOGA, TENN.****Knoxville Car Wheel Co.**

\*—KNOXVILLE, TENN.—\*

Manufacturers of All Kinds of

**CHILLED WHEELS**

For Railroads, Street Railroads, Ore and Coal Mines, and Lumbermen.

Steam Hammers,  
Steam Hoists,  
Foundry Cupolas,  
Derricks, Crabs,  
Horse Powers,  
Shieves, Drill Heads,  
Gearing, Pulleys,  
Bolts of all sizes,  
Locomotives and Engines  
Repaired and Indicated

CORRESPONDENCE SOLICITED.

Steel and Iron Boilers,  
Guild's Automatic  
Boiler Cleaner,  
Car and Locomotive Castings,  
Soft Iron Castings of all kinds,  
Heavy Castings a specialty.  
Wheels mounted on Axles if  
desired, with Oil Boxes  
and Bolts.

MENTION THIS PAPER.

**THE STEWART & MATTSON MFG. CO.****Railroad Car Trimmings & General Brass Ship Work.**Car Bearings and Ingot Metal, Switch and Car Locks, Fine Brass Castings, Brass Special Screws and Bolts,  
Car Trimmings Repaired, Repolished, Oxidized and Plated.

Office and Factory, Nos. 2042 to 2052 N. 10th St., PHILADELPHIA, PA.

ESTABLISHED 1832 ON PRESENT PREMISES

**The Best**

—IS—

**ALWAYS**

—THE—

**Cheapest.****Therefore**

BUY OUR

**COLOPHINE**

—OR—

**Perfect Oils**The above are our specialties in **MACHINERY OILS**, and are the best oils for  
the price manufactured. We can give you anything in the **OIL LINE**, any grade, at  
the very lowest prices. Correspondence solicited.**WM. C. ROBINSON & SON,**  
**MANUFACTURERS AND DEALERS IN OILS,**

217 South Street, Baltimore, Md.

~~~~~FOR THE LATEST IMPROVED~~~~~  
**GAS WORKS APPARATUS AND HOLDERS,**

ADDRESS

**KERR-MURRAY MANUFACTURING CO., FORT WAYNE, IND.**  
PLANS, ESTIMATES AND DRAWINGS FURNISHED.



## Taylor Lever Cotton Compress,

Cylinder 90 inches in Diameter.

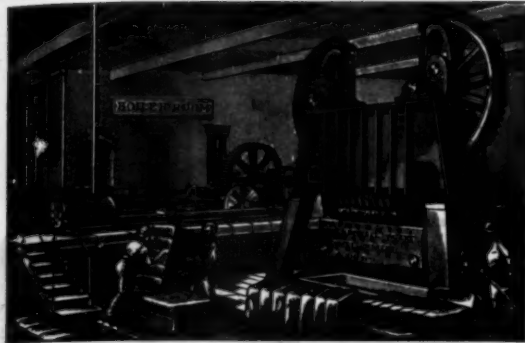
We make for the above compress the following claims:

1st.—The most POWERFUL Compress in the world. 2d.—The STRONGEST. 3d.—The most SIMPLE, consequently the least liable to get out of order. 4th.—The most ECONOMICAL, effecting a saving of from 30 to 50 per cent. in fuel. 5th.—It will compress as many, if not more, bales per day, as any other compress. 6th.—It is far the cheapest of any first-class Compress on the market. This machine is fully warranted to do the work as represented. Correspondence solicited. Address

**FILES, TAYLOR & FILES, Manufacturers,**

(—) HILLSBORO, TEXAS. (—)

## The Campbell Cotton Compress Co.



OFFICES,  
59 & 61 Walnut St.  
Cincinnati, Ohio,  
U.S.A.

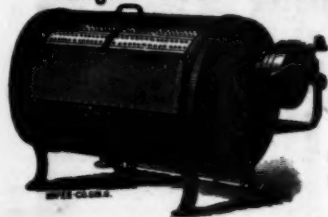
**Cheapest and Most  
ECONOMICAL.**

The Campbell Compress is the only machine that will run on small lots of cotton at a profit. Adapted to a small market. It does work equal to the best, and costs but one-half. Fully guaranteed. Correspondence solicited. Address

**CAMPBELL  
Cotton Compress Co.  
CINCINNATI O**

## Laundry Machinery.

Largest Stock. Latest Improvements. Fullest Line.



*Washing Machines,  
Ironing Machines,  
Centrifugal Machines,  
Mangles, Wringers, etc.*  
**BOILERS AND ENGINES.**

—OUTFITS FOR—

**Hotels and Public Institutions**

—A SPECIALTY.—

**The A. M. DOLPH CO.**

224 Washington Street,  
CHICAGO, ILL.

Cor. 9th St. and Freeman Ave.,  
CINCINNATI, O.

## ARCTIC ICE MACHINE

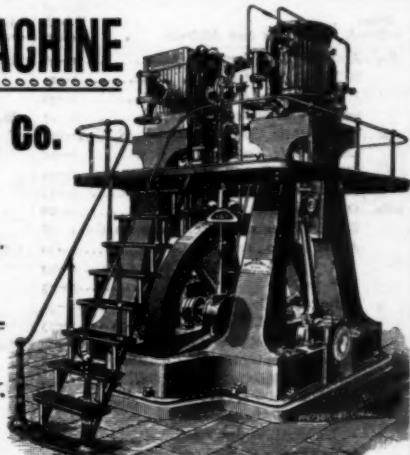
**Manufacturing Co.**

CINCINNATI, OHIO.

OFFICE, 24 PIKES BUILDING.

P. O. Box 348.

OUR OWN SHOPS.  
MACHINES CARRIED IN STOCK.  
AND ORDERS  
PROMPTLY EXECUTED.



The Improved Arctic with Corliss Engine.

GEORGE MOERLEIN,  
President.

JOHN GOETZ, JR.,  
Vice-President.

J. A. EBERHARDT,  
Sec'y, Treas. & Gen'l Mgr.

## The SOUTHERN GRANITE CO.

Quarries at LITHONIA, REDAN and STOCKBRIDGE, GA.

General Contractors in Granite.

We take pleasure in announcing that we are now prepared to furnish estimates upon the finest quality of

## LITHONIA — GRANITE

FOR ANY AND ALL PURPOSES, ESPECIALLY IN THE LINE OF

Fine Architectural, Monumental and Street Paving Work.

Samples, Plans, Specifications and Estimates will be Promptly Furnished.

PRINCIPAL OFFICE:

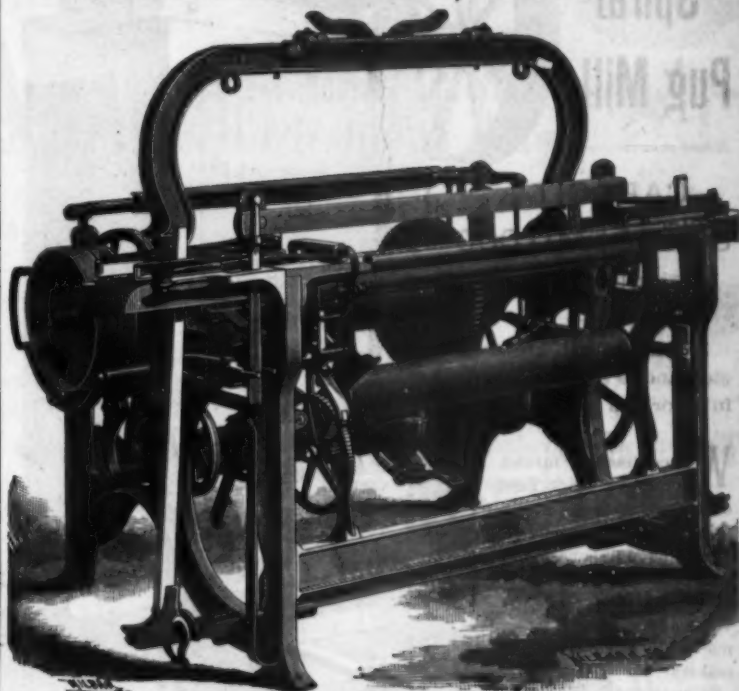
20 Kimball House, ATLANTA, GA.

BRANCH OFFICES:

19-20 Wiggins Block, CINCINNATI,  
And LITHONIA, GA.

## KILBURN, LINCOLN & CO.

FALL RIVER, MASS.



## LOOMS

For Cotton and Silk Weaving, Special Patterns  
for Weaving Cambric, Muslin Sheetings,  
Tickings, Ducks and Print Cloths

The Seacomet Mills, Fall River, wove in 300 days of 10 hours each 14,200,000 yards of 6x24 goods on 500 of our "New High Speed Looms," a daily average of 50 7 10 yards per loom per day.

## U. S. GUTTA PERCHA PAINT



AWARDED GOLD MEDAL  
New Orleans Exposition,  
1884 and 1885.

Also received  
**HIGHEST AWARD**  
From the American Institute,  
New York, 1887.

**Elastic,  
WATER-PROOF,  
Durable.**

The remarkable and only process  
of combining GUTTA PERCHA and  
other valuable materials with Lin-  
seed Oil without the use of injuri-  
ous solvents is controlled and  
worked by this company. We  
manufacture by this process a  
preparation which has

**NO EQUAL IN THE WORLD**

for coating over any surface, EN-  
DOORS OR OUT-DOORS,  
where Paint is ever required.  
Because of its peculiar texture and  
elasticity, which allow it to expand  
and contract with the surface it  
covers WITHOUT CRACK-  
ING, it is especially adapted  
for use in either hot or cold  
climates. Send for particulars and  
prices. Pamphlet on "Paint and  
Method of Manufacture" sent free  
to any person requesting it.

**J. WM. RICE.**  
President and Gen'l Mgr.  
**PROVIDENCE, R. I.**

AND

**Mention this  
paper.**

## A detailed black and white illustration of a large industrial machine, possibly a steam engine or pump. The machine features a large flywheel on the right side, a complex arrangement of gears and pistons, and a tall vertical structure on the left. The word 'PER' is visible in the background, suggesting a brand name or part of a larger text.

**Mention Manufacturers' Record.**

**J. W. PENFIELD & SON, WILLoughBY,**  
**Ohio.**

**40,000  
BRICK  
PER  
DAY**

**TILE**

**from 1 to 20 inches**

**13 style CLAY CRUSHERS**

**Machines with or without Crushers. 6 different Brickmachines.**

**ADDRESS FREY, SHECKLER & HOOVER, BUCYRUS, OHIO.**

**CUT  
OFF.**

**Engines and full  
Factory  
OUTFITS**

A black and white photograph of a mechanical device, likely a pump or motor. It features a cylindrical body with a flared base and a handle on the right side. The device is shown in a side profile, highlighting its mechanical components and the handle's position.

| <i>When<br/>ordered.</i>                             | <i>Name and Address.</i>                   | <i>Size of<br/>Sheet,<br/>Inches.</i> |
|------------------------------------------------------|--------------------------------------------|---------------------------------------|
| 1879..                                               | Arctic Ice Co., Augusta, Ga.....           | 1-36                                  |
| B. Berry, Berzelia, Ga.....                          | 1-21                                       |                                       |
| J. B. Connelly, Augusta, Ga.....                     | 1-39                                       |                                       |
| Summersville Mills, Augusta, Ga.....                 | 1-27                                       |                                       |
| 1880..                                               | Pee Dee Mfg. Co., Rockingham, N. C.....    | 1-39                                  |
| Langley Mfg. Co., Langley, S. C.....                 | 1-25                                       |                                       |
| Clifton Mfg. Co., Clifton, S. C.....                 | 1-54                                       |                                       |
| Piedmont Mfg. Co., Piedmont, S. C.....               | 1-54                                       |                                       |
| 1881..                                               | D. E. Converse, Glendale, S. C.....        | 1-18                                  |
| Eagle & Phoenix Mfg. Co., Columbus, Ga.....          | 1-36                                       |                                       |
| Arctic Ice Co., Augusta, Ga.....                     | 1-30                                       |                                       |
| " " "                                                | " " " "                                    | 1-33                                  |
| " " "                                                | " " " "                                    | 1-15                                  |
| Clifton Mfg. Co., Clifton, S. C.....                 | 1-54                                       |                                       |
| Dr. J. S. Boyd, Clay Hill, Ga.....                   | 1-15                                       |                                       |
| Thomas M. Holt, Haw River, N. C.....                 | 1-18                                       |                                       |
| Eagle & Phoenix Mfg. Co., Columbus, Ga.....          | 1-18                                       |                                       |
| Princeton Mfg. Co., Athens, Ga.....                  | 1-39                                       |                                       |
| 1882..                                               | D. E. Converse & Co., Glendale, S. C.....  | 1-18                                  |
| H. A. Merry, Berzelia, Ga.....                       | 1-27                                       |                                       |
| E. Lockhart, Eubanks, Ga.....                        | 1-27                                       |                                       |
| South Carolina R.R. Co., Charleston, S.C.....        | 1-19                                       |                                       |
| Roswell Mfg. Co., Roswell, Ga.....                   | 1-30                                       |                                       |
| Richmond & Alleghany R. R. Co.,<br>Richmond, Va..... | 1-9                                        |                                       |
| Riverside Cotton Mills, Danville, Va.....            | 1-42                                       |                                       |
| Leak, Wall & McRae, Rockingham, N. C.....            | 1-42                                       |                                       |
| 1883..                                               | Marietta Paper Mfg. Co., Marietta, Ga..... | 1-12                                  |
| " " "                                                | " " " "                                    | 1-24                                  |
| J. A. Harris, Holcomb's Rock, Va.....                | 1-23                                       |                                       |
| D. E. Converse & Co., Glendale, S. C.....            | 1-18                                       |                                       |
| The Roberdel Mfg. Co.,<br>Rockingham, N. C.....      | 1-38                                       |                                       |
| Pacolet Mfg. Co., Pacolet, S. C.....                 | 1-54                                       |                                       |
| Eagle & Phoenix Mfg. Co., Columbus, Ga.....          | 1-30                                       |                                       |
| J. C. Watson & Bro.,<br>Ridge Springs, S. C.....     | 1-21                                       |                                       |

| <i>When<br/>ordered.</i>                                 | <i>Name and Address.</i>                             | <i>Size of<br/>Sheet,<br/>Inches.</i> |
|----------------------------------------------------------|------------------------------------------------------|---------------------------------------|
| 1883..                                                   | The Roberdel Mfg. Co.,<br>Rockingham, N. C.....      | 1-38                                  |
| Hope Mills, Hope, N. C.....                              | 1-38                                                 |                                       |
| 1884..                                                   | Porter Mfg. Co., Clarksville, Ga.....                | 1-38                                  |
| Fairmount Mfg. Co., Williston, Ga.....                   | 1-38                                                 |                                       |
| E. I. Du Pont, De Nemours & Co.,<br>Wilmington, Del..... | 1-38                                                 |                                       |
| Geo. W. Brackenridge,<br>San Antonio, Texas.....         | 1-38                                                 |                                       |
| Young & Hack, Augusta, Ga.....                           | 1-38                                                 |                                       |
| 1885..                                                   | Richmond & Alleghany R. R. Co.,<br>Richmond, Va..... | 1-9                                   |
| San Antonio Water Works,<br>San Antonio, Texas.....      | 1-9                                                  |                                       |
| James Riddle & Son, Wilmington, Del.....                 | 1-9                                                  |                                       |
| 1886..                                                   | Roswell Mfg. Co., Roswell, Ga.....                   | 1-38                                  |
| Thomas M. Holt, Haw River, N. C.....                     | 1-18                                                 |                                       |
| Reedy River Mfg. Co.,<br>Reedy River Factory, S. C.....  | 1-38                                                 |                                       |
| Jessup & Moore Paper Co., Wilms, Del.....                | 1-38                                                 |                                       |
| " " " "                                                  | " " " "                                              | 1-38                                  |
| " " " "                                                  | " " " "                                              | 1-38                                  |
| Marietta Paper Mfg. Co., Marietta, Ga.....               | 1-38                                                 |                                       |
| " " " "                                                  | " " " "                                              | 1-38                                  |
| Augusta Factory, Augusta, Ga.....                        | 1-38                                                 |                                       |
| Lockwood & Kampman, San Ant'o, Tex.....                  | 1-38                                                 |                                       |
| " " " "                                                  | " " " "                                              | 1-38                                  |
| 1887..                                                   | Durham Water Works, Durham, N. C.....                | 1-38                                  |
| Richmond Paper Mfg. Co.,<br>Richmond, Va.....            | 1-38                                                 |                                       |
| Augusta Electric Light Co., Augusta, Ga.....             | 1-38                                                 |                                       |
| Petersburg Electric Light Co.,<br>Petersburg, Va.....    | 1-38                                                 |                                       |
| J. N. Williamson, Gibsonville, N. C.....                 | 1-38                                                 |                                       |
| Riverside Cotton Mills, Danville, Va.....                | 1-38                                                 |                                       |
| C. J. Milne & Son, Wilmington, Del.....                  | 1-38                                                 |                                       |
| Porter Mfg. Co., Clarksville, Ga.....                    | 1-38                                                 |                                       |

**HOLYOKE MACHINE CO.**  
**WORCESTER, MASS.**



# ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

## ★ CITY OF TALLADEGA, ★

Which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the County Seat of Talladega County.

**THE CITY HAS A POPULATION OF 5,000, AND ITS POPULATION IS RAPIDLY INCREASING.**

**T**ALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

**TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.**

THE CITY HAS

### AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE.** The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

**SYNODICAL FEMALE INSTITUTE**, Property valued at \$50,000.

**D. D. & B. INSTITUTE**, Property valued at \$150,000.

**BLIND INSTITUTE**, (in course of construction,) property valued at \$150,000.

**FOSTER COLLEGE**, property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

### ← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS**. Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

**A LARGE FURNACE PLANT** gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS**, with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. A **SASH, DOOR and BLIND FACTORY**, a **FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL**, and various other industries are in successful operation, and the **TALLADEGA ICE CO.** cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent, within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent., and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

**THE TALLADEGA LAND & IMPROVEMENT CO.** owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. **SPRING LAKE PARK** is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

**The Talladega Land & Improvement Co.,**      **Talladega, Ala.**

# ATHENS, East Tennessee,

THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES**. The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. **FINE MINERAL SPRINGS** are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The **EDUCATIONAL FACILITIES** are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

**THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000.** **THE ATHENS WOOLEN MILLS, \$100,000.**

**THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.**

**FOUNDRY & MACHINE SHOPS, \$25,000.**

**FURNITURE WORKS, \$15,000.**

**FLOURING MILLS, \$20,000, etc.**

500 men are now at work on the new railroad from Athens to the

## RICHEST IRON FIELDS IN THE SOUTH.

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11½ FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH**. The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES**. The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

### *Largest Colored Slate Deposits in the United States.*

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

## The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

**\$500,000 IN NEW MANUFACTURING ENTERPRISES**

At Athens, including a 100-ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

**\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.**

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices is beyond question a very fine investment.

## The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President

R. J. FISHER, Secy. and Genl. Manager.



# DECATUR, ALA.

Offers outside investors better inducements to locate than any other

 CITY IN THE SOUTH. 

## AS A CITY OF Mammoth MANUFACTURING Enterprises,

She has few equals and no superiors in the South.

There have been located at Decatur in the last few months the following Industries :

THE DECATUR LAND, IMPROVEMENT & FURNACE COMPANY. Has 50,000 ACRES of Iron, Coal, Mineral and Timber LANDS.

United States Rolling Stock Company's Plant, from Urbana, Ohio,  
\$1,000,000.

Louisville & Nashville Railway Construction Shops, \$300,000.

Charcoal Company's plant, costing \$120,000.

A seventy-ton Charcoal Iron Furnace, costing \$190,000.

A one hundred-ton Blast Iron Furnace, costing \$225,000.

The Decatur Iron Bridge Construction Company; cost of plant, \$100,000.

The American Oak Extract Company's plant, costing \$60,000.

Ivens & Sons Steam Boiler and Engine Works, costing \$100,000.

Morse Cotton Compress plant, costing \$60,000.

Southern Horse Nail Company, \$100,000.

Decatur Lumber Company, Saw and Planing Mills, costing \$50,000.

Berthard & Co., Sash, Door and Blind Factory, cost \$15,000.

The Decatur Street Railway Company.

The Plumbers' Supply Co., \$25,000.

The Telephone Company.

The Alabama Lumber & Fruit Package Co.

Brush Electric Light Company, cost \$10,000.

The Ironton Wheelbarrow Company, cost \$25,000.

The St. Louis Investment Company, \$200,000.

Howland & Co's Water Works System, costing \$200,000.

Bleymeyer Artificial Ice Company, cost \$10,000.

Four Mammoth Brickyards.

Jones, Poley & Co's Lumber Yards.

The Hoosier Mills & Building Company.

The Gate City Sash & Door Company.

Decatur Car Wheel & Construction Company, \$60,000.

Arantz Bro's Mills and Lumber Yards.

Grant & Co's Furniture Factory.

Decatur Carriage Company.

Southern Lumber Company.

H. S. Freeman's Mills and Lumber Yards.

The Alabama Farmer's Friend Fence Machine Company.

The Decatur Artificial Stone Company.

Decatur Chain and Architectural Iron Works, capital \$100,000.

Natural Gas Company, capital \$200,000.

First National Bank, capital \$100,000.

The Exchange Bank of Decatur, capital \$100,000.

Merchants' Insurance Company, capital \$100,000.

Decatur Building Association, capital \$300,000.

Decatur Building Company, capital \$1,000,000.

Buchheit's Bottling Works.

Decatur Printing Company.

Two daily papers, three weekly papers.

Two hotels—one \$100,000, completed, and one \$300,000 being built; the largest in the South.

Grand Opera House, \$100,000.

THERE ARE OTHER

## Mammoth Enterprises

Locating here, and contracts are being made with some of the most extensive industries in the United States.

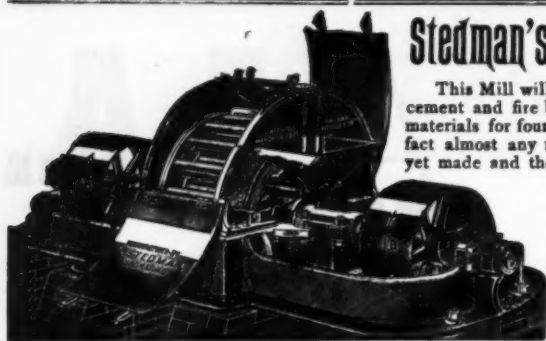
Decatur is the healthiest city in Alabama, the death rate among whites for 1886 being only 11 in 1,000.

## Decatur Land, Improvement & Furnace Company.

E. C. GORDON, President. H. G. BOND, Vice-Prest. and Gen. Manager. W. T. MULLIGAN, Secretary.

This Company has been pre-eminently successful in promoting the interests of the city of Decatur.

CORRESPONDENCE SOLICITED WITH PARTIES SEEKING LOCATIONS.

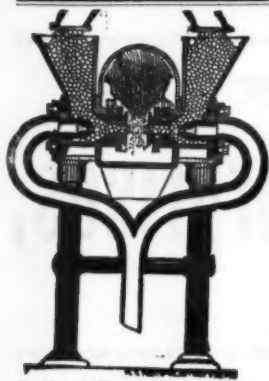


## Stedman's Improved Disintegrator and Pulverizer.

This Mill will disintegrate or pulverize materials of all kinds, for brick and tile, for cement and fire brick, and slag from open air furnaces for use in rolling mills, and materials for foundry facings, iron ores, animal matter in almost all conditions,—in fact almost any material that can be disintegrated. It is an improvement over any yet made and the result of practical experience.

Send for Descriptive Circular.

**STEDMAN'S**  
Foundry & Machine Works,  
AURORA, IND.



Sectional View of Pulverizer.

## PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

### TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphurets and ores containing rusty gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

### PNEUMATIC PULVERIZER COMPANY,

L. F. HOLMAN, Pres.

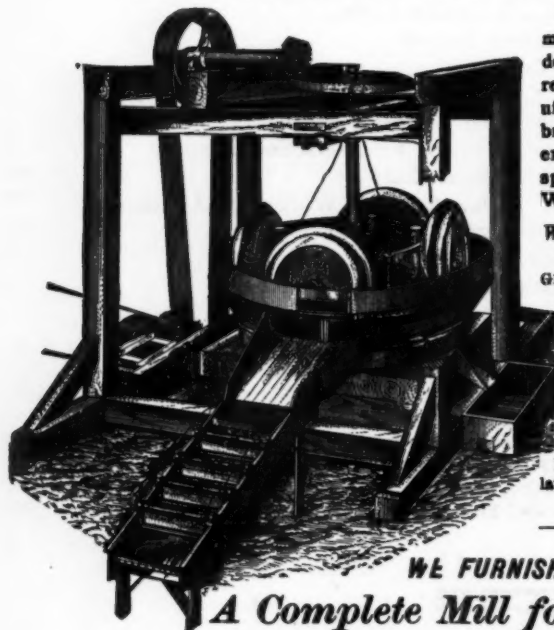
F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.

## WISWELL

# Ore Pulverizer and Amalgamator COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrell & Marsden, manufacturers of stone-breakers & ore-crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

Wiswell Electric Mining Machinery Co.:

GENTLEMEN: After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold saving machine I have ever seen.

Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH

A Complete Mill for \$2,500.

DELIVERED ON BOARD CARS.

For further information address

## WISWELL

# Electric Mining Machinery Company,

A. A. REEVE, Treas.

4 Post-Office Square, Boston, Mass.

# Sullivan Diamond Core Drills

OTTUMWA HOISTING AND HAULING ENGINES

A full line of machinery carried in stock. Contractors for Diamond Drill Prospecting. Send for catalogue and prices.

## DIAMOND PROSPECTING CO.

22 W. Lake Street, Chicago, Ill.

Eastern Office, 18 Broadway, New York.



# M. C. BULLOCK MFG. CO.

MANUFACTURERS OF

Diamond Pointed Rock Drills,  
STEAM ENGINES and BOILERS,

Lane's Patent Band Friction Hoisting Machinery,

FOR MINES, BLAST FURNACES, DOCKS, ETC.

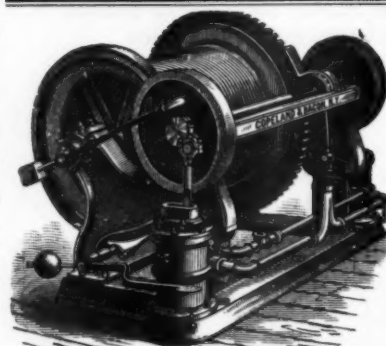
STRAIGHT LINE ENGINES.

GENERAL OFFICE:

Address,

WORKS:

123 Jackson St., Phoenix Building, Lake and Tallman Av.,  
CHICAGO, U. S. A.



# BACON

Winding Engines  
Furnace Hoists  
Mine Hoists.

(With or Without Boilers.)

"Mining PLANTS," Concentrating  
Works and Dredging Machinery  
Furnished Complete.

## COPELAND & BACON,

85 Liberty Street, New York.

535 Arch Street, PHILADELPHIA.

REFERENCES:—Crosby Magnetic Iron Mines, Brewster's, N. Y. Crown Point Iron Co., Crown Point, N. Y. Reliance Iron Co., St. Louis, Mo. New York Sea Island Chemical Co., Rochester, N. Y.



# Webster, Camp & Lane Machine Co.

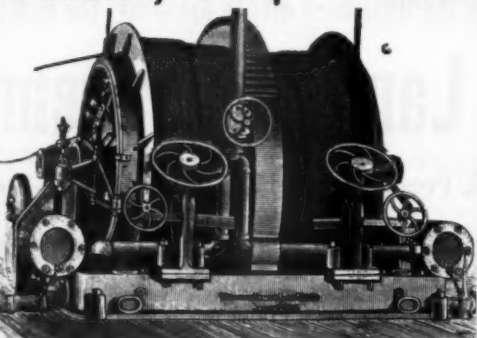
BAND FRICTION  
HOISTS.

Endless and Tail Rope  
Haulage Engines for

COAL MINES.

Automatic and Slide Valve  
Steam Engines, Boilers,  
Pumping Plants, Ca-  
ges, Ore Cars,  
Sheaves, etc.

AKRON, O.



## Roller & Detachable Chain Belting

Detachable in every Link

FOR IMPROVED

ELEVATORS,

Conveyers,

AND

DRIVING BELTS.

FOR HANDLING

Coal, Ores, Grain,

CLAY, BRICK, &c.

ADDRESS

The JEFFREY MFG. CO.

121 W. STATE ST.,

Columbus, Ohio.

Also Manufacturers of the  
Large Coal Mining Machines  
and Rotary Power Coal Drills.  
Send for Illustrated Catalogue.





**PERFORATED METAL**  
FOR  
**COTTON SEED OIL MILLS**  
**RICE MILLS**  
**MINING SCREENS &c**  
**THE ROBERT AITCHISON**  
**PERFORATED METAL CO.**  
76 Van Buren St. Chicago Ill.







**WOOD WORKING MACHINERY**

FOR ALL PURPOSES



**THE BENTEL & MARGEDANT CO., HAMILTON, O. U.S.A.**

**Stilwell's Patent**

**Lime Extracting HEATER AND FILTER Combined.**

The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

**Thoroughly Tested. Over 3,000 of Them in Daily Use.**

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. Illustrated Catalogue Free.

**STILWELL & BIERCE MFG. CO., DAYTON, O.**



Established 1874. **Cleveland Twist Drill Co.**

MANUFACTURERS OF  
Taper Shank Drills,  
Straight Shank Drills,  
Blacksmith Drills,  
Bitstock Drills,  
Straight Fluted Drills,  
Machine Bit Drills.



Send for Catalogue.

OFFICES—{ 24 and 26 WEST ST., Cleveland, O.  
101 CHAMBERS ST., New York.

Write for Discounts.

MANUFACTURERS OF  
Self-feeding Reamers,  
Expanding Reamers,  
Shell Reamers,  
Stay-bolt Taps,  
Taper Reamers.

**New Process Twist Drill Co., Taunton, Mass., Hot Forged Twist Drills**  
Of every description. Warranted to stand more than those made by any other process.



Walsh, Hoen & VonKappf, Agents, 31 S. Charles Street, Baltimore, Md.

**The STANDARD TOOL CO.**

—Cleveland, Ohio,—

MANUFACTURERS OF  
**INCREASE TWIST DRILLS, Etc.,**

TAPER SHANK DRILLS,

Straight Shank Drills,

MACHINE BIT DRILLS,

Bit Stock Drills,

**SOCKETS,**



Hand  
and Shell  
**REAMERS,**

Standard Gauges,

Milling Cutters

and Special Tools,

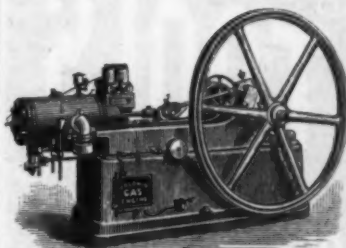
**MORSE TAPER REAMERS,**

—Standard Patent—

**TWIST DRILL GRINDING MACHINE**

New York Office, 33 Chambers St.

**The Baldwin Gas Engine**



The Simplest, most Efficient and Steadiest running

**Gas Engine**

Ever Built.

Adapted for Electric Lighting

AND ALL INDUSTRIAL PURPOSES.

**OTIS BROTHERS & CO.**

Elevators and Hoisting Machinery,

New York. Boston. Philadelphia. Pittsburgh.

**A. HOEN & CO.**

LITHOGRAPHERS, BALTIMORE MD.

Our facilities for the production of

**ARTISTIC**

**Color Work**

AND ALL STYLES OF

**Fine Commercial Engraving**

Are Unsurpassed.

All work executed under careful

and personal supervision at prices

consistent with first-class pro-

ductions. Sole proprietors of the

**CELEBRATED**

**LITHOCAUSTIC PROCESS**

Branch Establishment:

New Building, RICHMOND, VA



**KREHL, HAUSER & CO., GIRARD, O.**

TANNERS OF **OAK LEATHER.**

Specialties—Fine Harness, Superior Saddle Skirting, Black and Fair Bridle.

Steam  
Engines,  
Shafting,  
Hangers,  
Pulleys, etc

# CANNING MACHINERY,

The Warfield Manufacturing Co.

336, 338, 340, 342 NORTH ST. - - BALTIMORE, MD.

Warfield's  
Green Corn  
Cutter.

## E. W. BLISS CO.

Plymouth, Pearl, John and Adams Sts.

OFFICE: 17 Adams Street.

BROOKLYN, N.Y.

### » PRESSES, «

### DIES

—AND—

### Special MACHINERY

—FOR—

### Sheet Metal Workers.

Cam Toggle and Drawing Presses, Power Presse, Foot Presses Automatic Drop Presses for Forging and Stamping, Double Seaming Machines for round, square and oval work, Circular Shears, hand and power; Squaring Shears, foot and power; Canning Machinery, Dies of every description, Tools for working Sheet Metals, Petroleum Can Machinery, Special Machinery, Adjustable Machines for cutting all sizes of oval blanks—the only Machines in the market that will cut a true oval. Send for Circulars.

**PRESSES, DIE S, AND OTHER  
SHEET-METAL TOOLS**  
FERRACUTE MACHINE CO.  
BRIDGETON, N. JERSEY, U.S.A.  
FRUIT CAN MACHINERY.

**THE LONG & ALLSTATTER COMPANY,**  
HAMILTON, OHIO.  
Double, Single, Angle-Bar, Gang, Horizontal, Twin, Roller, Spacing, Gate, Multiple, BELT and STEAM-DRIVEN  
PUNCHES and SHEARS,  
Over 300 Sizes.  
ALSO  
Power Cushioned  
**HAMMER**

Small Double Machine. Send for New Catalogue. Small Single Machine.

177 GENUINE  
INGOTS & MANUFACTURES  
BEAR OUR  
REG. TRADE MARKS.

**PHOSPHOR-BRONZE**  
INGOTS, CASTINGS & MANUFACTURES.  
THE PHOSPHOR BRONZE SMELTING CO. LIMITED  
512 ARCH ST. PHILADELPHIA PA. U.S.A.  
ORIGINAL MANUFACTURERS OF PHOSPHOR-BRONZE IN THE UNITED STATES AND OWNERS OF THE U.S. PATENTS

## NIAGARA STAMPING & TOOL COMPANY,

MANUFACTURERS OF

TINNERS' MACHINES and TOOLS,

Squaring Shears, Press Dies, &c.

FOR WORKING SHEET METAL.

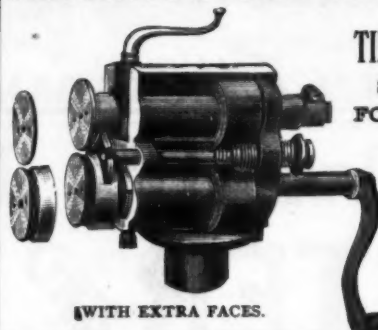
Fruit Can Dies and Tools.

CANNERS' OUTFITS.

OFFICE AND WORKS:

Cor. Randall & Superior Sts., Buffalo, N.Y.

Write for Catalogue and Price List, and mention this paper.



(WITH EXTRA FACES.

**EWART'S PATENT CHAIN BELTING**

**LINK BELT MACHINERY.**  
Elevating and Conveying Machinery.  
EMPLOYING EWART CHAIN.  
For Coal, Phosphate, Tan, Ore, Stone, &c.

**BURR & DODGE,**  
123 & 125 N. 5th Street,  
PHILADELPHIA, PA.  
Link Belt Machinery Co., Chicago, Ill.  
Send for new catalogue, containing all the latest improvements in Elevators and Conveyors.

**R. SWORMSTEDT & CO.**  
**MILL FURNISHERS**  
—MANUFACTURERS' AGENT FOR THE—  
Steel Key Detachable Link Belting,  
For ELEVATORS, CONVEYORS and TRANSMISSION of POWER.  
Shafting, Pulleys and Hangers a Specialty.  
OFFICE AND WAREHOUSE:  
No. 11 S. FREDERICK STREET, BALTIMORE, MD.

**MILL STONES**  
—AND—  
**BOLTING CLOTHS**

**Baltimore Mill Furnishing Works,**  
Manufacturers of  
Mill Stones, Roller Mills, Portable Mills, Pulleys, Shafting, and Mill Gearing.  
Importers of  
Bolting Cloths, and General Mill Furnishers.  
**B. F. STARR & CO.**  
North and Center Sts., Baltimore

**EMPIRE CITY PULVERIZING MILLS,**  
For Coffee, Ginger and other roots, Spices, Chemicals, &c.  
TO ANY DEGREE OF FINENESS.  
Also Grains of all kind, Bar Corn, Beans, Peas, etc.  
**J. B. WARING & SONS,** 106 & 108 Liberty Street, N. Y.  
Complete Pulverizing Plants Furnished.

**DAVIDS' PATENT DISINTEGRATING MILL**  
For Bones, Phosphates, Tankage, Ores, Clay, Fish Scrap, Salt Cake, &c.  
Fertilizer Machinery. Mixers' Rolls, Breakers, &c., &c. Marine  
Railways, Clay Temperers. Send for Catalogue.  
**JAMES MURRAY & SON, 102 to 108 York Street, Baltimore, Md.**  
Advertise in the MANUFACTURERS' RECORD.















1957



## NEW DEPARTURE IN IRON ROOFING.

As is well known, heretofore only 8-ft. lengths in "V" Crimped Iron have been made. In order to accommodate the growing and special demands of our trade, we now manufacture 6-ft., 8-ft. and 10-ft. lengths in this style.

**The Cincinnati Corrugating Co.**

CINCINNATI, OHIO.

## NOT "Something New in Iron Roofing."

We have been furnishing **V CRIMP ROOFING FOR LAST TWO YEARS** in 6 feet, 7 feet, 8 feet, 9 feet and 10 feet lengths and can now furnish them in **BOTH V CRIMP & STANDING SEAM ROOFINGS.**

**W. G. HYNDMAN & CO., Cincinnati, Ohio.**

**CAMBRIDGE ROOFING CO**

MANUFACTURERS OF

**Crowl's Patent**

STANDING SEAM

**Roofing OF Steel.**



Also, Plain, Rolled, Corrugated, Crimped Edge and Beaded, Roofing, Siding and Ceiling. **CAMBRIDGE, O.**

Awarded First Medal by the New Orleans Exposition.

**CANTON IRON ROOFING CO., CANTON, OHIO,**

MANUFACTURERS OF THE H. W. SMITH PATENT

**STEEL ROOFING**

Made of genuine sheet steel and calaminated steel.



**Corrugated Iron** Roofing and Siding, Beaded Iron Ceiling and Siding, Crimped Edge Roofing and Siding, Roof Paint, Roofs' Paper, &c.

Send for Catalogue, Price List and Samples.

**IRON ROOFING.**

1. "GLOBE STANDING SEAM."
2. "Double Seamed V Crimped."
3. "Excelsior V Crimped," old style
4. "READY ROLLED "Capped."

**GLOBE IRON ROOFING &**



**Corrugated IRON.**

ROOFING, SIDING and CEILING, ALL DESIRED GAUGES and LENGTHS.

Send for our new descriptive catalogue, estimates and prices.

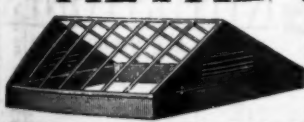
**CORRUGATING CO., CINCINNATI, OHIO.**

**HOLTON ROOFING SIDING.**

**IRON ROOFING CEILING & C.**  
NEW LISBON, O.  
AGENTS WANTED EVERYWHERE



## METAL SKYLIGHTS



And VENTILATORS for Mills, Stores and Dwellings. Galvanized Iron and Copper Cornices and Gutters. Metal Shingles. Sheet Metal Work for buildings. Send for illustrated circular.

**H. VAN NOORDEN & CO.**  
383 Harrison Avenue, - - BOSTON.

**SYKES IRON ROOFING CO., NILES, O.**

**SYKES' IMPROVED** Best Roof in the World. Suitable for all classes of Buildings. Easy Put On.



All my Iron is Re-Rolled and Box Annealed, well Painted on both sides with Best of Paint and Pure Linseed Oil.

Send for Circular and Price List, and mention this Paper.

**CORRUGATED IRON FOR ROOFING, SIDING, AND CEILING.**  
**FIVE SIZES OF CORRUGATIONS CURVED OR STRAIGHT.**

Any length up to 20 feet. Any gauge from No. 16 to 27 inclusive.

We want to mail you our new Illustrated Catalogue, (84 pages) the finest ever issued by a roofing company.

**THOMPSON**

**MANUFACTURING**

**CO.,**

CLEVELAND, OHIO.

**FIRE-PROOF WATER-PROOF WIND-PROOF**

## GUTTA PERCHA ROOFING!

The Great Roofing for the South. Send for Southern Manufacturers' References. For Steep or Flat Roofs, Factories, Mills, Lumber Sheds, etc. Send for Catalogue, Testimonials, Samples, etc.

**Empire Paint & Roofing Co., 1128 & 1130 Race St., Philadelphia, Pa.**



## Warren's Natural Asphalt Roofing,

Superior to all others for Flat Roofing.

OVER 20,000,000 SQUARE FEET USED WITHIN 10 YEARS.

This roofing is not injuriously affected by atmospheric agencies and will not waste or become brittle by evaporation as with goods made from Coal Tar. Send for sample and circular No. 12.

**WARREN CHEMICAL & MFG. CO. 114 John Street, NEW YORK.**

**Keene's Cornice Brake**



Patented July 18, 1884.

Send for Catalogue B.

**Geo. C. Keene & Co.**

4 Lawrence Street, Cincinnati, O.

MANUFACTURERS OF

**Cornice Machinery.**



Catalogue sent on Application.

ARCHITECTURAL

**Sheet Metal Work**

ORNAMENTS, STATUARY,

And SPUNWORK IN

**BRASS, COPPER & ZINC**

Galvanized Iron Cornices, Window Caps, Finials, Etc.

Manufactured by

**BAKEWELL & MULLINS, Salem, O.**

## Queen City Printing Ink Co.

CINCINNATI, OHIO.

**THE INK**

WITH WHICH THIS PAPER IS PRINTED IS MADE BY THE **QUEEN CITY PRINTING INK CO**  
CINCINNATI, O.

MANUFACTURERS OF ALL DESCRIPTIONS OF

**INKS!**

**Varnishes and Sizes**

FOR PRINTERS' USE.

New York Office, . . . 194 William Street.  
Philadelphia Office, . . . 434 Walnut Street.

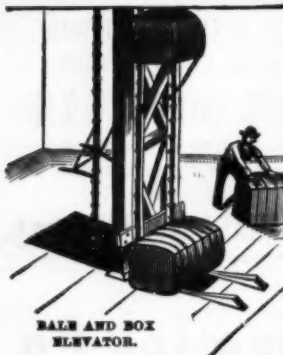
## BELDEN'S Upright Power Hammer

This Hammer possesses advantages superior to any other in the market. It has rollers, valves, our piston rods, consequently repairs are trifling. It occupies less space, less power to drive, strikes much harder and truer blows than hammers with double the weight of ram.



Cut of 60-pound Hammer.

**The Jeffrey Mfg. Co.**  
121 West State St., Columbus, O.  
MANUFACTURERS OF  
ELEVATORS, CONVEYERS,  
DRIVING BELTS, for Handling



BARREL AND BOX  
ELEVATOR.

Barrels, Boxes, Bales, Grain, Coal, Ores, &c.  
Illustrated Catalogue sent on application.  
Correspondence solicited.



**Bates' Hand Elevators.**  
Patented April 14, 1871. Released July 26, 1876.  
OVER 4,000 IN USE.

Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, &c., is transferred from one story to another.

**JAMES BATES, Patentee,**  
Nos. 1 3 & 5 President Street. BALTIMORE.

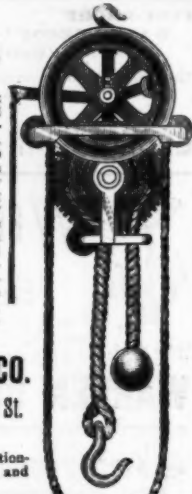


**UNION BRASS WORKS,**  
99, 101 & 103 First Street, CINCINNATI, OHIO.

## PATENT PORTABLE Rope Hoist.

USE AND SUFFICIENCY.

The best quick lift Hoist made. Will hold a load at any point. Quick lowering, light and cheap. Rope will not cut out the wheels. Load rope can be pulled up or down by hand instead of pulling on hand rope to raise or lower empty hook. Rope weighs less than chain for same strength, and can be obtained anywhere, while chain cannot. Five sizes now made to lift from 1500 to 3000 lbs. Send for descriptive circulars and references.



**ENERGY MFG CO.**

1115 to 1123 S. 15th St.

PHILA., PA.

Hatchway Hoists, friction-driven Centre Grinders, and Drill Guides, &c.

## \$250 WILL BUY



**THE BEST SAW MILL**  
Yet offered for the money.  
SEND FOR CIRCULAR.

RICHMOND MACHINE WORKS,  
RICHMOND, INDIANA.

**\$250 SINGLE. \$350 DOUBLE.**



With Saws and Tools.

Top Saw Frame can be added to Single Mill when desired. Capacity, 3,000 to 5,000 per day with 3 men. 10 to 25 horse portable engine will drive it. Agents wanted. Send for description and terms.

**ROCKWOOD, NEWCOMB & CO.**  
180 to 190 S. Pennsylvania St., Indianapolis, Ind.

## PILE DRIVERS, STEAM DREDGERS



**Vulcan Iron Works,**  
CHICAGO.

Write for circular of our improved Nasmyth Pile Hammer.

## Queen City Pattern Works,

ALEX. D. CUNNY,

132 & 134 E. Second Street, Cincinnati, O.

Patterns made to order for Machinery, Stoves and Ornamental Work. Metal Letters made and kept in stock.

## McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.



Manufacture those celebrated Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c. Prices and catalogues sent free. Address **H. McSHANE & CO.** Baltimore, Md.

Mention this Paper.

## THE BRADSTREET Mercantile Agency

HAS NOW BEEN  
Under its present successful management for the past seven years.

And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and if in need of an Agency, to test its ability to serve you.

**CHAS. F. CLARK, President.**  
Baltimore Office,—American Building,  
**H. KERRHAW, Supt.**

## E. HARRINGTON, SON & CO.

Established 1867.

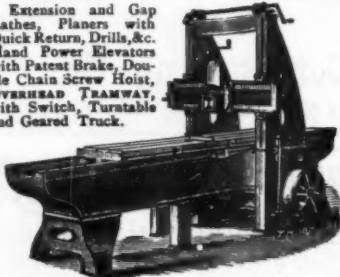
Works and Office,  
N. 15th St. & Penna. Ave., Phila., Pa., U.S.A.

Manufacturers of a full line of

## Iron Working Machinery.

INCLUDING

Extension and Gap Lathes, Planers with Quick Return, Drills, &c. Hand Power Elevators with Patent Brake, Double Chain Screw Hoist, OVERHEAD TRAMWAY, with Switch, Turntable and Gearing Truck.



Gear Cutting a Specialty. Send for estimates.

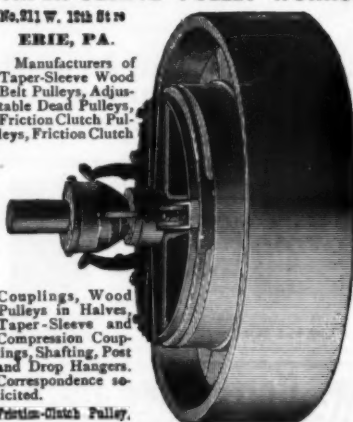
Represented by J. Q. MAYNARD, 12 Cortland St., N. Y.; C. E. KIMBALL, 93 Oliver St., Boston; W. BUCHNER, 102 Main St., Cincinnati.

## TAPER-SLEEVE PULLEY WORKS.

No. 211 W. 15th St.

ERIE, PA.

Manufacturers of Taper-Sleeve Wood Belt Pulleys, Adjustable Dead Pulleys, Friction Clutch Pulleys, Friction Clutch

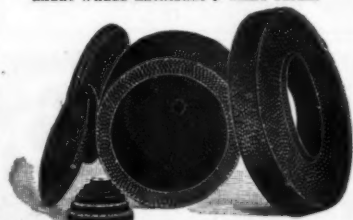


Couplings, Wood Pulleys in Halves, Taper-Sleeve and Compression Couplings, Shafting, Post and Drop Hangers. Correspondence solicited.

Friction-Clutch Pulley.

## Emery and Corundum Wheels.

EMERY WHEEL MACHINERY & FLINT PAPER.



All goods manufactured by us are guaranteed to give satisfaction. Give them a trial on their merits. Write for circular.

**Springfield Glue & Emery Wheel Co.**  
SPRINGFIELD, MASS.

## WIRE RAILING

and Ornamental Wire Works.

**DUFOR & CO.** 36 N. Howard St., Baltimore.

Wire Railing for Cemeteries, Lawns, Gardens, Offices and Balconies; Window Guards, Tree Guards, Wire Cloth, Sieves, Fenders, Cages, Sand and Coal Screens, Iron Bedsteads, Chairs, &c.

## FOR SALE.

One 50-ton Zero Ice Machine at half-price. Correspondence solicited.

**R. P. GERLACH,** Box 110, Cleveland, Ohio.

## THE BAY LINE

FOR—  
FORTRESS MONROE, NORFOLK and the SOUTH.

The Bay Line comprises the New and Elegant Steamers "VIRGINIA," "CAROLINA" and "FLORIDA."

All the Comforts and Luxuries of a First-Class Hotel are afforded the Traveler. Spacious and Elegant Saloons and Staterooms, furnished with an especial view to comfort. Unsurpassed Cuisine, which is made a specialty with this Line. Elegant service and courteous attention. Steamers leave Baltimore daily except Sundays at 9 P. M.

At Old Point Comfort is located the SPLENDID HYGIEA HOTEL, a Delightful Resort at all Seasons of the Year. For Tickets and Information, apply at Company's office,  
**157 W. BALTIMORE ST., BALTIMORE,**  
Or on Board of Steamers.  
**D. J. HILL, Superintendent.**  
**F. BROWN, General Ticket Agent**



Fig. 133.

**Improved Steam Jacket Kettle**  
PLAIN OR ENAMELED.

SIZES.  
20 Gallons  
35  
70  
100



Fig. 134.

**Double Jacket Steam Kettle.**

SIZES.  
1 Gallon  
5  
10  
15  
25  
30  
50  
60  
80  
125



Fig. 135.

**Iron Double-bottom Steam Kettle.**  
WITHOUT JOINTS.

SIZES.  
2 1/2 Gallons  
9  
12  
20  
37

## STEAM KETTLES,

Especially adapted to the requirements of Canneries, Butchers, Chemists, Confectioners, Varnish Makers, etc., or, in fact, for any operation where the direct fire and the consequent liability to burn the material is an objection.

**PANCOAST & MAULE,**  
243 & 245 South Third Street,  
PHILADELPHIA.

Correspondence solicited from parties requiring any Goods in the above lines.

Mention this Paper when you Address us.

## The CLEVELAND STONE CO.

MANUFACTURERS OF

## GRINDSTONES

OF ALL KINDS.

MOUNTED GRINDSTONES,  
SCYTHE STONES, &c. Also,

**Building Stone,**  
CURBING, FLAGGING & SAWED STONE.  
CLEVELAND, OHIO.

## BOBBINS AND SPOOLS,

Manufactured by

**John L. Cheney & Co.**  
LOWELL, MASS.

## PROMPT DELIVERY.

Correspondence Solicited.

## Creamery and Dairy Machinery AND SUPPLIES.

Outfits and Machinery for Cheese Factories.

Write for Illustrated Catalogue.

**JOHN S. CARTER, Syracuse, N.Y.**  
47 & 49 West Jefferson Street.



# THE St. James Hotel

Cor. Charles and Centre Streets. BALTIMORE, MD. Near the Washington Monument.

ON THE EUROPEAN PLAN.

Strictly First-Class. Rooms Single and En Suite.

**FINEST CAFÉ IN BALTIMORE.**

The St. James Hotel has the pleasantest situation, amid beautiful surroundings, and is patronized by the better class of travelers. The hotel is now under a new management, and has been refitted and improved in every way. Secure rooms in advance by addressing

**JOHN S. CROWTHER, Manager.**

## THE STILLMAN

CLEVELAND, OHIO.

Unsurpassed in its Elegance, Fine Cuisine and Table Service.

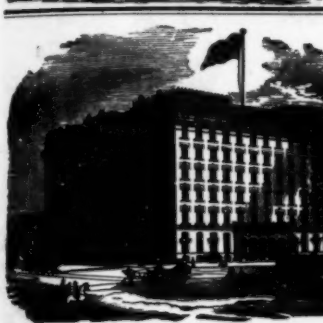
**Only Fire-Proof Hotel in Cleveland.**

Every room heated by Steam and lighted by Electric Light.

**RATES \$3.50 TO \$5.00 PER DAY.**

Elegant suites can be secured by addressing

**J. WARREN COLEMAN, Jr., Manager.**



## Colonnade Hotel,

Chestnut St., Cor. 15th,

One block from new Penna. Railroad Depot

**PHILADELPHIA.**

H. J. & G. R. CRUMP.

**A FAVORITE RESORT FOR ALL SOUTHERN TRAVEL.**



## PREMIER FLOUR OF AMERICA.

**Patapsco Flouring Mills.**

ESTABLISHED 1774.

**OUR PATENT ROLLER FLOURS**

Are manufactured from the CHOICEST WHEAT OBTAINABLE. Their superiority for **UNIFORMITY, STRENGTH AND UNAPPROACHABLE FLAVOR** has long been acknowledged. Our **PATAPSCO SUPERLATIVE PATENT STANDS UNRIVALLED**. Of a **RICH CREAMY COLOR**, it makes a Bread that will **SUIT THE MOST FASTIDIOUS**.

ASK YOUR GROCER FOR

PATAPSCO SUPERLATIVE PATENT, CHESAPEAKE EXTRA,

PATAPSCO FAMILY PATENT, ORANGE GROVE EXTRA.

**C. A. GAMBRILL MFG CO.**

Office, 214 Commerce St., Baltimore, Md.

## The True Idea of Assurance.

**Women's Mutual Insurance and ACCIDENT COMPANY.**

OFFICERS AND

RENEATH B. PHILLIPS, Pres.

MARGARET HOLCOMBE, Vice-Pres.

EMILY TAYLOR, Secretary.

Elizabeth S. Roberts, H. Louise Gates,



DIRECTORS:

ELIZABETH HANDELSBURGH, Treas.

CORNELIA KAMPING, Attorney.

Charlotte Mulligan, M. F. Hoagland.

ALFRED K. HILLS, M. D., 405 Fifth Avenue.

JOHN A. KAMPING, Attorney and Counsel, 125 Broadway, New York.

MARY PUTNAM JACOBI, M. D., 110 W. 14th Street.

Incorporated under the Laws of New York.

### ITS OBJECT.

This company is the pioneer in throwing down the bars of unjust discrimination against women in life insurance. Reason and common observation prove mortality to be a law of nature at every age, and married as well as single. To remove this prejudice, and to secure to women an equal estimation in her insurability, the promoters of this enterprise have devoted themselves. Consistently with this principle **WOMEN AND MEN** are equally insured in this company without discrimination on account of sex.

### ITS MEMBERSHIP.

Includes persons between the ages of 14 and 65, of approved physical condition. The Life Class is separate and distinct from the Accident Class, members being liable for losses only occurring in the class to which they belong.

### ITS PLAN.

Offers insurance at cost, and embraces the best features of other companies, with such improvements added as experience has shown to be desirable for the member's advantage and the security of the association.

### ITS SAFETY AND SECURITY.

Based on the **ECONOMICAL** system, **NO IMPROBABLE** claims, and **NO SECURITY RESERVE**.

### FINALLY.

This company avoids complicated schemes and plans by means of which impossible results are promised. Its contracts are plain, easily fulfilled and liberal. It issues the following:

1. **Ordinary Life Policy, \$100 to \$10,000.**

2. **Ordinary Accident Policy, \$5,000 death indemnity; \$50 weekly.**

3. **Combined Life and Accident Policy.**

4. **\$500 Savings Bond.**

**BANK OF THE METROPOLIS, New York City.**

**FARMERS' LOAN AND TRUST CO., New York City.**

The officers would be pleased to furnish any further particulars which may be desired in relation to this Company's affairs, or the way to obtain a policy.

Agents are desired in every city, village and district throughout the beautiful sections of the country.

Address all communications to the **WOMEN'S MUTUAL INSURANCE AND ACCIDENT CO., 125 BROADWAY, NEW YORK.**



**FROM AND -TO- CINCINNATI.**

**TOLEDO, SAGINAW, DETROIT, NIAGARA FALLS, TORONTO,**  
AND ALL POINTS IN MICHIGAN AND CANADA.

**CONNEERSVILLE, RUSHVILLE, INDIANAPOLIS, DANVILLE, BLOOMINGTON,**  
AND ALL POINTS WEST AND NORTHWEST.

**RICHMOND, LOGANSPOET, CHICAGO, DELPHI, MONON**  
AND ALL POINTS IN THE NORTHWEST.

**FORT WAYNE, KALAMAZOO, GRAND RAPIDS, PETOSKEY, MACKINAW,**  
AND ALL POINTS IN MICHIGAN.

Through Sleeping Cars run between Cincinnati and Chicago via Richmond and Air Line, also via Indianapolis and Monon Line; and Cincinnati, Ft. Wayne and Grand Rapids, Cincinnati, Toledo and Detroit.

Parlor Cars between Cincinnati and Indianapolis; Cincinnati, Toledo and Detroit; Cincinnati, Ft. Wayne and Grand Rapids; and Cincinnati and Chicago.

Reclining-chair Cars between Cincinnati and Keokuk, Iowa, via Indianapolis and Decatur, Ill.

**SOLID TRAINS BETWEEN CINCINNATI AND CHICAGO.**

For information apply to any Railroad Office in the United States or Canada. In Cincinnati, O., at City Ticket Office, N. W. corner Fifth and Vine Sts.; Depot Ticket Office, Fifth and Hoody Sts.; also General Passenger Agent's Office, No. 200 West Fourth Street.

C. C. WAITE, Vice-Prest. and Gen'l Manager. CHAS. H. ROCKWELL, Gen'l Pass'r and Ticket Agent.

## PIEDMONT AIR LINE.

## RICHMOND & DANVILLE R.R. CO.

THE SHORT AND DIRECT LINE FROM

**Washington, D. C., and Richmond, Va.,**

To Atlanta, Augusta, Columbia, Asheville, Raleigh, Greensboro, Salisbury, Goldsboro, Birmingham, Montgomery, Vicksburg, Shreveport, Mobile, New Orleans, Texas, Mexico and California, and the South and Southwest.

**DOUBLE DAILY, SOLID TRAINS** between Washington and Atlanta. Pullman's Palace Buffet and Drawing-Room Sleeping Cars without change to Atlanta, New Orleans, Augusta, etc.

For maps, time-tables, rates of passage, freight, etc., apply to nearest Station Agent of the Piedmont Air Line, or to any Railroad Agent of principal lines North or South.

PEYTON RANDOLPH, General Manager. SOL HAAS, Traffic Manager.

JAS. L. TAYLOR, Gen. Pass. Agent.

## Chesapeake & Ohio Route.

**Solid Trains from Washington.**

LEAVE WASHINGTON, B. & P. STATION:

11.34 A. M. Day Express for Charlottesville, Staunton, Clifton Forge, Charleston, Huntington, Ashland, etc., etc.

5.30 P. M. Louisville and Cincinnati Express. Pullman Cars and a Solid train to Louisville and Cincinnati, making all Western and Southwestern connections.

Washington Ticket Office.

**513 Pennsylvania Avenue,**

C. H. CHAPIN, Northeastern Passenger Agt.

JOHN HUIE, General Traffic Manager. H. W. FULLER, General Passenger Agt.



**Issues Policies of Insurance after Careful Inspection of the Boilers, covering Loss or damage to property, and Loss of Life and Personal Injury**

**—ARISING FROM STEAM BOILER EXPLOSIONS.—**

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any agency.

M. ALLEN, Pres. W. H. FRANKLIN, Vice-Prest. J. B. PIERCE, Secy.

BOARD OF DIRECTORS:

J. M. ALLEN, President. GEORGE J. HENDER, President, Atlas Fire Insurance Co.

F. W. CHERRY, Asst. Treas. Cheney Bros. Silk Mfg. Co.

CHARLES M. BEACH, of Beach & Co.

DANIEL PHILLIPS, of Adams Express Co.

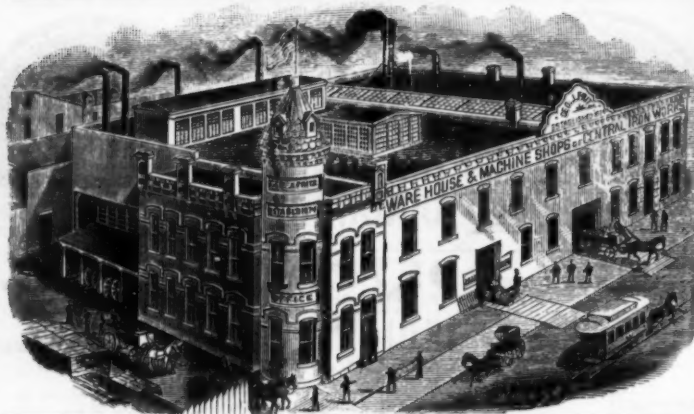
R. W. H. JARVIS, Pres. Colt's Fire Arms Mfg. Co.

THOMAS O. KENDRICK, Secretary Atlas Life Insurance Co.

LEWIS B. BARNARD, of Case, Lockwood & Barnard.

ROB. H. G. ROBINSON, Attorney-at-Law, Hartford.

LAWFORD & MAKIN, Agents for Maryland, 21 Second St., Baltimore, Md.



## Engines and Machinery.

Steam Engines and Boilers, Boiler Feeders and Pumps, Shafting, Pulleys and Hangers, Mill Gearing and Supplies, Brass Goods, Fittings and Tools.

### MODERN ROLLER MILLS

Electric Light Engines, single and double; Brewers' and Coopers' Machinery, Laundry and Bottlers' Machinery. Patterns made to order. Belting, Hose, Packing, etc. Machinery repaired on short notice.

Millers' Rolls Reground and Corrugated.

Send for Descriptive Catalogue, Price and Pattern List.

## GEO. J. FRITZ

Central Iron Works,

2014 to 2028 S. Third St.,

TELEPHONE 204

ST. LOUIS, MO.

## BALL AUTOMATIC CUT OFF ENGINE

MADE ONLY BY

THE BALL ENGINE CO. ERIE PA.

It will pay you to write to WILLIAMS ENGINE CO., 447 North St., Baltimore, Md., for

## —AUTOMATIC— ENGINES,

For any duty. Electric Light Engines a specialty. Quality high. Prices moderate. Address WILLIAMS ENGINE CO., 447 North Street, Baltimore, Md.

Subscribe to the MANUFACTURERS' RECORD.

Price \$4.00 a year, or six months for \$2.00.

## The La France Fire Engine Company

ELMIRA, N. Y.

SOLE MANUFACTURERS OF

The La France Piston and Rotary Steam Fire Engine.

Hayes' Patent Extension Hook and Ladder Truck and Fire Escape.

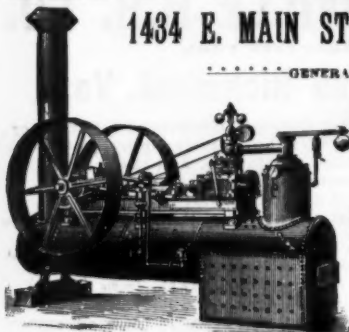
Heaters and Fire Department Supplies. Send for Catalogues, etc.



## H. P. EDMOND,

1434 E. MAIN STREET, RICHMOND, VA.

GENERAL AGENT FOR



## Erie City Iron Works

For Virginia and West Virginia.

Boilers Engines and Saw Mills,

OTTO SILENT GAS ENGINE,

Hotchkiss Mechanical Boiler Cleaner, Corliss Engines, Hydraulic Presses and Pumps, Steam Cocks, Injectors and BELTING.

## CHAPMAN VALVE MANUFACTURING CO.

MANUFACTURERS OF

### VALVES AND GATES

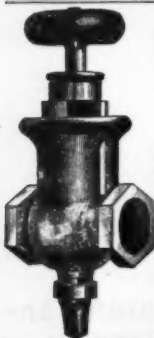
FOR

Steam, Water, Gas, Ammonia, Etc. Gate Fire Hydrants, with and without Independent Nozzle Valves.

ALL WORK GUARANTEED.

General Office Works, INDIAN ORCHARD, MASS.

Treasurer's Office, 72 Kilby & 112 Milk St., Boston.



## THE CURTIS PRESSURE REGULATOR

FOR

STEAM, WATER AND AIR,

Has been the STANDARD now for six years; is unapproachable for simplicity and reliability, and is used by the best posted steam fitters and engineers in all the large cities of the Union; also, in England, Germany, Austria and Russia. It will automatically reduce and control the pressure of any fluid, regardless of the fluctuations of the initial pressure. It is in general use wherever steam, water or air needs to be controlled automatically, in Factories, Breweries, Electric Lighting, Steam Heating and Pumping.

### CURTIS REGULATOR CO.

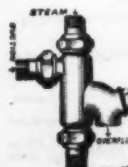
OFFICE AND MANUFACTORY: 160 BEVERLY STREET, BOSTON.

Gen'l Agencies: 100 Liberty St., N.Y.; 203 N. Front St., Phila.; 108 5th Av., Chicago; 210 S. 3d St., Minneapolis; 707 Market St., St. Louis; 21 Union St., N. Orleans.

## The Penberthy Injector.

A FAIR PROPOSITION.

As every injector is tested by the manufacturers before it leaves the factory, we know that, if properly connected and instructions are carried out, they cannot fail to work. The manufacturers offer to pay the expenses of any man to go to their factory, and \$10 per day while there, if the injector does not work, provided it has not been misused.



JENKINS BROS. { 71 John Street, New York.  
105 Milk Street, Boston.  
13 So. Fourth Street, Phila.

## BOILERS.

Horizontal, Vertical and Locomotive Boilers.

SMOKE STACKS, TANKS, HOUSE HEATERS,

Foundry Ladles, Sheet Iron Work, &c.

## REMINGTON MACHINE CO.

Send for Catalogue. WILMINGTON, DEL.



### Stewart Heater Co.

BUFFALO, N. Y.

THE BEST AND CHEAPEST

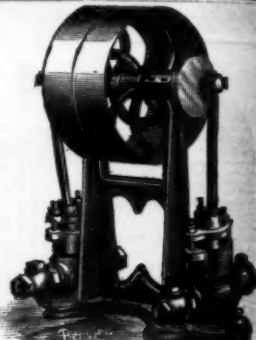
### Feed Water Heaters and Purifiers.

Single and Double Plunger

BOILER FEED PUMPS.

The Red Jacket Fine Blower.

Write for Catalogue.



## McLAUGHLIN'S IMPROVED ADJUSTABLE STEAM FLUE CLEANER.

IT NEVER FAILS.



Pat. Dec. 24, 1886.

Send for catalogue G. GEO. B. McLAUGHLIN MANUFACTURING CO. 137 Oliver Street, Boston, Mass.



## JOHN E. RANDLE & CO.

Memphis, Tenn.

MANUFACTURERS OF

### Architectural Iron Work

Cotton-Seed Oil Machinery,

Ajax & Chickasaw Steam-Power Cotton Presses,

ATLAS ENGINES AND BOILERS,

Saw Mills, Corn Mills, Cotton Gins, Pulleys, Shafting, &c.

CORRESPONDENCE SOLICITED.

## Ludlow Valve Manfg. Co.

Office and Works:

938 to 954 River Street, and 67 to 83 Vail Avenue,

—TROY, N. Y.—



## VALVES

Double and Single Gate, 4 inch to 48 inch—outside and inside. Screws, Indicators, etc., for Gas, Water, Steam, Oil. Send for Circular.



Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves



THE BABCOCK & WILCOX CO.

# THE VALUABLE BOOK ON

## STEAM

THE BABCOCK & WILCOX COMPANY, NEW YORK AND GLASGOW.

NEW YORK: 30 CORTLANDT ST. N.Y. 107 HOPE ST. GLASGOW, SCOTLAND.

FREE ON APPLICATION

WATER TUBE STEAM BOILERS.

BRANCH OFFICES:

- BOSTON, MASS. 65 OLIVER ST.
- PHILADELPHIA, PA. 32 N. 5TH ST.
- CHICAGO, ILL. 64 S. CANAL ST.
- NEW ORLEANS, LA. 57 CARondelet ST.
- SAN FRANCISCO, CAL. 561 MISSION ST.
- LONDON, ENG. 114 NEWGATE ST.
- MANCHESTER, ENG. 3 VICTORIA BUILDING
- PARIS, FRANCE. 40 RUE DE MALTE
- HAVANA, CUBA. W. I. 50 SAN IGNACIO
- SYDNEY, N.S.W. 3 SPRING ST.

GLASGOW

— THE —

## BABCOCK & WILCOX

### BOILERS

Are Used in the

### ★ SOUTH ★

|                                                                   | H.F. |
|-------------------------------------------------------------------|------|
| Pennsylvania Steel Co., Baltimore, Md., 3,400                     |      |
| Gosport Navy Yard, Norfolk, Va., 183                              |      |
| Newberry Cotton Mills, Newberry, S.C., 480                        |      |
| Ponce de Leon Hotel, St. Augustine, Fla., 416                     |      |
| Gadsden Furnace Co., Gadsden, Ala., 604                           |      |
| Tennessee Coal, Iron & Railroad Co., South Pittsburgh, Tenn., 604 |      |
| Senate Wing, U. S. Capitol, Washington, D. C., 320                |      |
| Wise Brothers, Baltimore, Md., 100                                |      |
| Alabama & Tennessee Coal and Iron Co., Sheffield, Ala., 1,200     |      |
| Hanna Distilling Co., Baltimore, Md., 400                         |      |
| F. & H. Fries, Salem, N. C., 930                                  |      |
| Jno. Crossley & Sons, Southwood Plantation, La., 1,500            |      |
| Louisiana Sugar Refining Co., New Orleans, La., 900               |      |

## The JOHN ASHCROFT Patent TRIANGULAR Revolving Steel Grate Bars & Furnace Doors

Eight per cent. in coal saved by the use of these Doors and Steel Bars guaranteed.

These Steel Bars last four times longer than any cast-iron bar ever made.

Sectional View of Steam Boiler, fitted with John Ashcroft Patent Furnace Door and Triangular Revolving Steel Grate Bars. Fireman cleaning fires by shaking and revolving the bars, which thoroughly free the furnace from ashes, and prevents the formation of clinkers, without the use of fire tools or opening the furnace door.

RESULT.—Increase of steam and a saving of coal, and no injury to the boiler by cold air impinging on the boiler shell.

By this operation a saving of 8 per cent. is secured.

FOR INFORMATION AND PRICES, ADDRESS

The John Ashcroft Patent Grate, Bar and Furnace Door Man'g Co.  
No. 73 Gold Street, New York.

P. O. BOX 100.

## SAVE FUEL.

Are you putting cold water into your boiler?

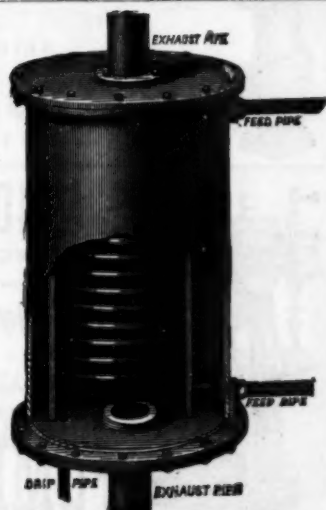
You can heat it boiling hot with the exhaust steam out of your engine.

You would save TWENTY-FIVE PER CENT. of the fuel required to do the same work without a

Feed Water Heater.

Send for our catalogue on this subject.

**D. A. Tompkins Co.** Charlotte, N. C.



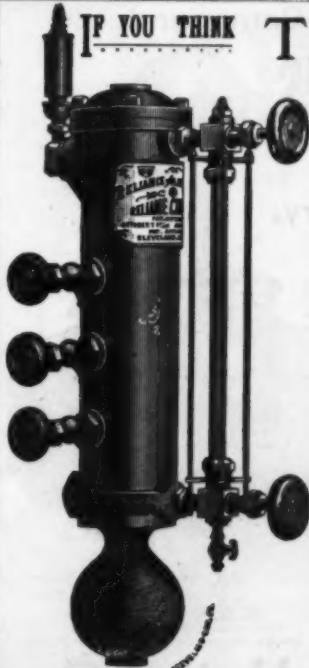
## THE IMPROVED FLORIDA STEAM HEATER

The best and most complete House Heater in the world. Self-feeding, automatic, portable and saves all expense of brick-work. Most economical. Carries steam from 10 to 12 hours without attention. Compact. 14 sizes, from 4 to 8 feet high. Anti-clinker grate, easily shaken, no dust. Sales larger than the combined sales of all reputable Steam Heaters.

3500 in ACTUAL USE, all giving the best satisfaction. Estimates furnished on application. Send for Illustrated Catalogue. Address

PIERCE, BUTLER & PIERCE MFG. CO., SOLE MANUFACTURERS, SYRACUSE, N. Y.

GENERAL AGENCIES: GEO. H. COBB, 87 William St., New York, N. Y.; CRANE BROS. MFG. CO., Chicago, Ill.; JAS. B. ROBERTSON & CO., Baltimore, Md.; W. O. NELSON MFG. CO., St. Louis, Mo.; H. TARKER & SON, Chicago, Ill.; JAMES F. WOOD & CO., Philadelphia, Pa.



## THE RELIANCE Safety Water Columns

Promote carelessness, you are greatly mistaken. There is not a man living, be he skilled engineer or negro stoker, who will not, from the very nature of things, watch the water closer with than without them. They are as certain to not whistle if the water is right as they are to whistle if it is wrong, and those in attendance take good care to keep it right. Through extra watchfulness and these automatic alarms the best economical results are obtained, and the danger of explosions and damage from too much and too little water is reduced to a minimum. They are a needed safeguard, and you can ill afford to be without them. They are for sale and warranted by dealers and boiler makers generally. Send for illustrated price-list.

## RELIANCE GAUGE CO.

Argyle Building, CLEVELAND, OHIO.

## STEEL CASTINGS

From 1-4 to 15,000 lbs. Weight.

True to pattern, sound, solid, free from blow-holes, and of unequalled strength. Stronger and more durable than iron forgings in any position or for any service whatever. 40,000 CRANK SHAFTS and 30,000 GEAR WHEELS of this steel now running prove this. CRANK SHAFTS and GEARING specialties. STEEL CASTINGS of every description. Send for circulars and prices to

CHESTER STEEL CASTINGS CO.

Office, 407 Library St., Philadelphia. Works, Chester, Pa.

Subscribe to the MANUFACTURERS' RECORD.





**SENECA FALLS PUMP & FIRE APPARATUS WORKS**



**RUMSEY & CO. (LIMITED) PROPRIETORS, SENECA FALLS, N.Y. U.S.A.**

**CAMERON STEAM PUMPS.**

PUMPS FOR  
BOILER FEEDING  
MINES  
REFINERIES,  
BREWERIES,  
TANNERIES,  
IRRIGATING,  
FIRE PURPOSES,  
RAILROADS &  
FILLING TANKS.  
CRANK & FLY WHEEL  
& VACUUM PUMPS.

SEND FOR ILLUSTRATED  
CATALOGUE A.

SIMPLE,  
COMPACT,  
DURABLE,  
EFFICIENT.

ADAPTED TO ALL  
PURPOSES.

NO OUTSIDE  
VALVE GEAR.

**The A. S. Cameron Steam Pump Works,**  
FOOT OF EAST 23D STREET. NEW YORK.

ARTESIAN WELL PUMPS. MINING PUMPS. PISTON PATTERN. PLUNGER PATTERN.

ESTABLISHED **POOLE & HUNT.** 1851

**Founders and Machinists.**

**POOLE & HUNT'S**

**LEFFEL \* TURBINE \* WATER \* WHEEL,**

Prices as Low as any other First-Class Wheel.

**Machine \* Moulded**

**MILL GEARING.**

Our plant for the production of MACHINE-  
MOULDED MILL GEARING is unequalled in the country, and we are prepared  
to fill orders with dispatch and at GREAT  
SAVING IN COST OF PATTERNS.



**Shafting, Pulleys,  
HANGERS, PEDESTALS.**

SHAFTING, PULLEYS, HANGERS  
and COUPLINGS, of latest and most ap-  
proved designs.

N. B.—Shipping facilities the best in all  
directions.

Send for Pamphlet. Send for Price-List.

**POOLE & HUNT, BALTIMORE, MD.**

**TWO 3-INCH PUMP PRESSURE REGULATORS**  
Were placed some months ago by the BLAKE PUMP CO. on the pumps of the Minne-  
apolis, Kan., Water Works. The engineer in charge says: "I cannot speak too highly  
of the working of these Regulators."

**MASON REGULATOR CO.** 22 Central Street, BOSTON.

**Shafting, Hangers.** Custom of every  
Description made.  
Stationary, Distillery  
Mill and Boiler Work.  
**JAC. H. MARQUETTE, 118 W. Falls Ave., BALTIMORE, MD.**

# BUY THE BRUSH

Then you will have the best of all

## Electric ★ Apparatus

Write immediately for a catalogue regarding

### Arc AND Incandescence, BRUSH LIGHTS AND MOTORS.

**The Brush Electric Co.**  
CLEVELAND, O.

★ BUCYRUS FOUNDRY & MFG. CO.

BUCYRUS, OHIO.

Builders of—

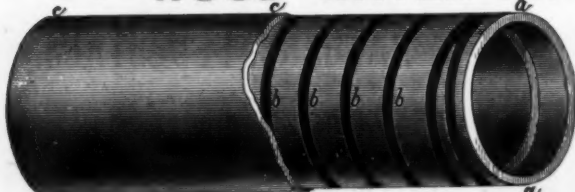
Steam Shovels,

Steam Dredges,

WRECKING CARS. ★

A. WYCKOFF & SON, ELMIRA, N. Y.

★ MANUFACTURERS OF  
WOOD WATER PIPE



a Wood. b Hoop-iron bands. c Asphaltum coating.

FOR  
Coal and Iron Mines  
COKE WORKS  
AND  
General Water  
SUPPLY.

SEND FOR  
CATALOGUES AND  
PRICES.

CHATTANOOGA, TENNESSEE.  
**CHATTANOOGA SAW WORKS.**

MANUFACTURERS OF  
**SUPERIOR SAWS.**

MOULDING KNIVES OF EVERY DESCRIPTION.  
ESPECIAL ATTENTION  
GIVEN TO THE REPAIRING OF ALL KINDS OF SAWS.

## Hercules ICE Machine,

CORLISS ENGINES,

Hydraulic and Rolling Mill

WORK.

HEAVY MACHINERY A SPECIALTY.

Write for Estimates and Catalogue.  
Mention this paper.

HERCULES IRON WORKS, CHICAGO, ILL.

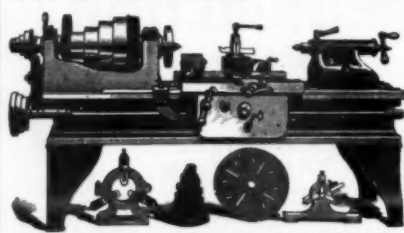
Shapers, Engine Lathes AND Drills.

LODGE, DAVIS & CO.

CINCINNATI, O.

WRITE FOR PRICES.

IT WILL PAY YOU.



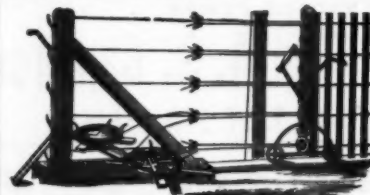
17", 20", 21", 24", 27" ENGINE LATHES.

20", 24"  
Upright Drills.  
25", 28", 30",  
40" B. G. B. F.  
DRILLS



UPRIGHT DRILL.

## LITTLE GIANT PORTABLE FENCE LOOM



Weaves the Fence on the Posts in Position.

Save Money by Building your own Fence.

Costs but 51 Cents per Rod to Build.

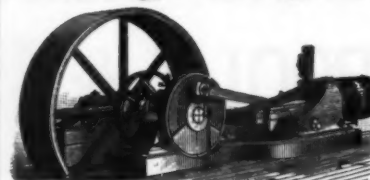
Capacity Sixty Rods Per Day!

MANUFACTURED BY

RICHMOND CHECK ROWER CO., 1100 & 1102 North E St., Richmond, Ind.

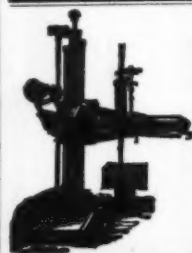
## New Tangye Buckeye Automatic Cut-Off Engines

25 TO 1,000 H. P.



IN USE, OVER 1,000.  
Sole Agents—Wiggs & Bacon, Birmingham, Ala.  
Jas. P. Creighton, Louisville, Ky.

Buckeye Engine Co., Salem, Ohio.



THE  
Universal Radial Drill Co.

CINCINNATI, O.

Manufacturers Exclusively of

"Universal"  
AND  
"Radial" Drilling Machines

TO STANDARD GAUGES.

Prices upon application. Correspondence solicited.



## There is no Roof Equal to a Good Tin Roof.

See that your tinner uses only the Best Material on your Buildings. Every sheet of "GILBERTSON'S OLD METHOD" is stamped with Brand and Gauge Mark. In addition the net weights of the plates are branded upon the boxes; and the goods are fully guaranteed.

**MERCHANT & CO.**

PHILADELPHIA.

NEW YORK.

CHICAGO.

LONDON.

